

CRETACEOUS (CAMPANIAN) BIVALVES OF THE COFFEE SAND IN MISSISSIPPI
ILLUSTRATED

David T. Dockery III, RPG



David T. Dockery III



Exogyra erraticostata Stephenson, 1914, both valves with left valve attached to *Turritella*, length of oyster 58.8 mm, height 57.3 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2612.

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MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

OFFICE OF GEOLOGY

2020

CRETACEOUS (CAMPANIAN) BIVALVES OF THE COFFEE SAND IN MISSISSIPPI

New Coffee Sand localities during the construction of the Natchez Trace Parkway along the Twenty Mile Creek Overlook in Lee County (MGS locality 128) in 1976 and a borrow pit in 1982 (MGS locality 129) exposed rich beds of beautifully preserved fossil mollusks. Mary Dockery (shown at bottom) is collecting fossil shells at MGS locality 129 in the summer of 1982. Bulk loads of sediment from this site were taken to MDEQ Office of Geology's Northwest Street office and sieved for fossils. Many of the gastropods from these two localities were published in 1993 in MDEQ Office of Geology Bulletin 129 entitled *The Streptoneuran Gastropods, Exclusive of the Stenoglossa, of the Coffee Sand (Campanian) of Northeastern Mississippi*. Bulletin 129 gives much more detail on this fossil mollusk horizon referred to as the Chapelville fossiliferous horizon and is available on our website under publications.

The following illustrated pages of Cretaceous bivalves is systematically arranged according to the MolluscaBase website (as it was while this work was underway) into the following subclasses listed in alphabetical order:

Subclass Heterodonta

Subclass Palaeoheterodonta

Subclass Protobranchia

Subclass Pteriomorpha



Class Bivalvia, Subclass Heterodonta, Infraclass Archiheterodonta, Order Carditida, Superfamily Crassatelloidea, Family Crassatellidae, Genus *Crassatella* B001.



Crassatella roodensis (Stephenson, 1923), right valve, length 61.3 mm, height 44.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2480.



Crassatella roodensis (Stephenson, 1923), left valve, length 61.1 mm, height 47.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2481.



Crassatella roodensis (Stephenson, 1923), both valves showing left valve, length 52.8 mm, height 40.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2482.



Crassatella gardnerae Harbison, 1945, both valves showing left valve, length 55.8 mm, height 42.4 mm, Coon Creek Tongue of the Ripley Formation, MGS locality 127. MGS figured specimen 2483.



Crassatella vadosa Morton, 1834, both valves showing left valve, length 44.8 mm, height 35.1 mm, Coon Creek Tongue of the Ripley Formation, type locality on Coon Creek in McNairy County, Tennessee. MGS figured specimen 2484.



Crassatella ripleyana Conrad, 1858, both valves showing left valve, length 47.9 mm, height 35.0 mm, Owl Creek Formation, MGS locality 126a. MGS figured specimen 2485.



Crassatella roodensis (Stephenson, 1923), both valves, length 28.2 mm, height 21.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2486.



Crassatella roodensis (Stephenson, 1923), juvenile, right valve, length 7.5 mm, height 5.9 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2487.



Crassatella roodensis (Stephenson, 1923), juvenile, left valve, length 8.0 mm, height 6.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2488.

Class Bivalvia, Subclass Heterodonta, Infraclass Archiheterodonta, Order Carditida, Superfamily Crassatelloidea, Family Crassatellidae, Genus *Uddenia* B002.



Uddenia texana Stephenson, 1941, left valve, length 2.6 mm, height 2.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2489.

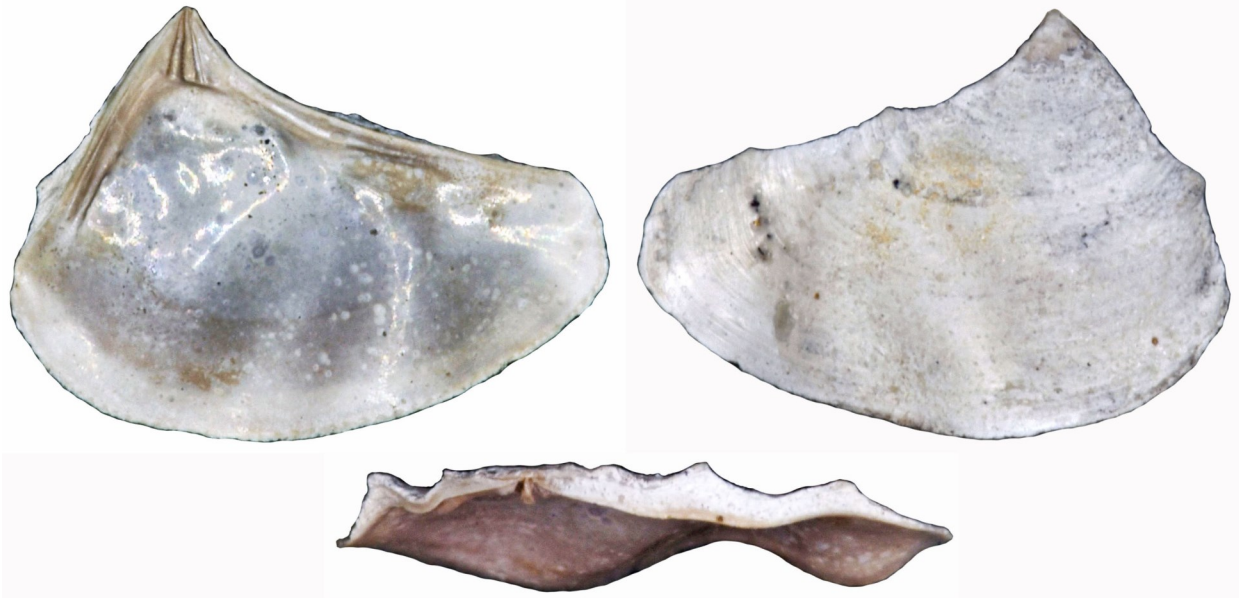
Class Bivalvia, Subclass Heterodonta, Infraclass Archiheterodonta, Order Carditida, Superfamily Crassatelloidea, Family Crassatellidae, Genus *Scambula* B003.



Scambula perplana Conrad, 1869, right valve, length 10.9 mm, height 7.8 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2490.



Scambula perplana Conrad, 1869, left valve, length 10.8 mm, height 7.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2491.



Scambula perplana Conrad, 1869, right valve, length 8.9 mm, height 6.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2492.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Anomalodesmata, Order Pholadomyida, Superfamily Clavagelloidea, Genus *Ascaulocardium* (B004)



Ascaulocardium armatum (Morton, 1834), length of tube 24.6 mm, Coffee Sand, MGS locality 129. Figured in Pojeta and Sohl, 1987, *Ascaulocardium armatum* (Morton, 1833), New Genus (Late Cretaceous): The ultimate variation on the Bivalve Paradigm: Journal of Paleontology, v. 61, Issue 524 (Paleontological Society Memoir 24, November 1987, p. 1-77.



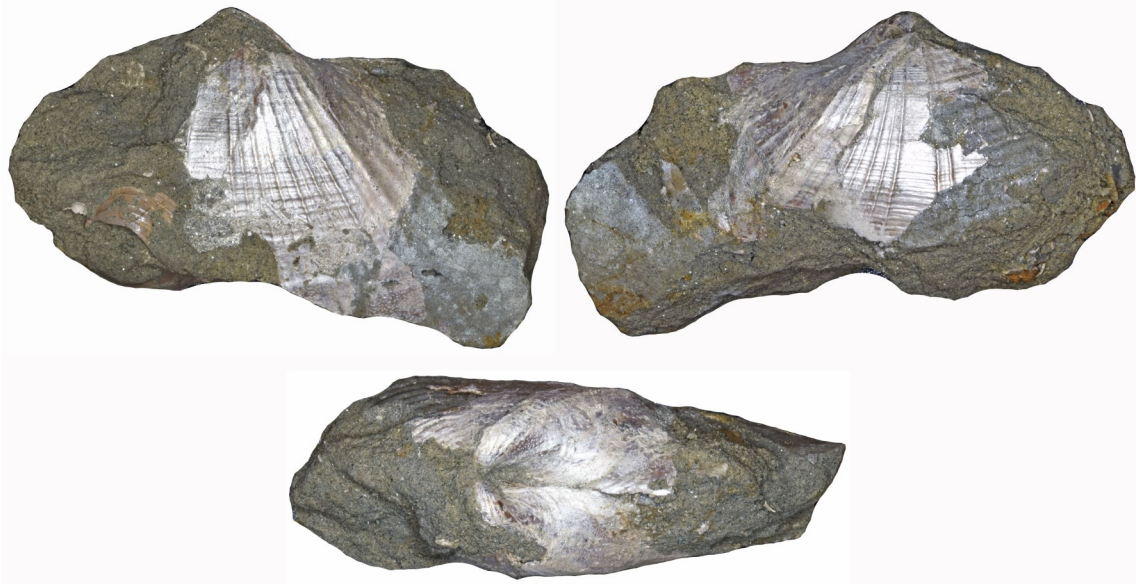
Ascaulocardium armatum (Morton, 1834), length of tube 24.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2493.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Anomalodesmata, Order Pholadomyida, Superfamily Pholadomyoidea, Family Pholadomyidae, Genus *Pholadomya* B005.



Pholadomya littlei Gabb, 1876, both valves, length 108.5 mm, height 89.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2494.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Anomalodesmata, Order Pholadomyida, Superfamily Pholadomyoidea, Family Laternulidae, Genus *Anatimya* B006.



Anatimya sp., both valves partially preserved, length of matrix block 79.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2495.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Myida, Superfamily Dreissenoidea, Family Dreissenidae, Genus *Dreissensia* B007.

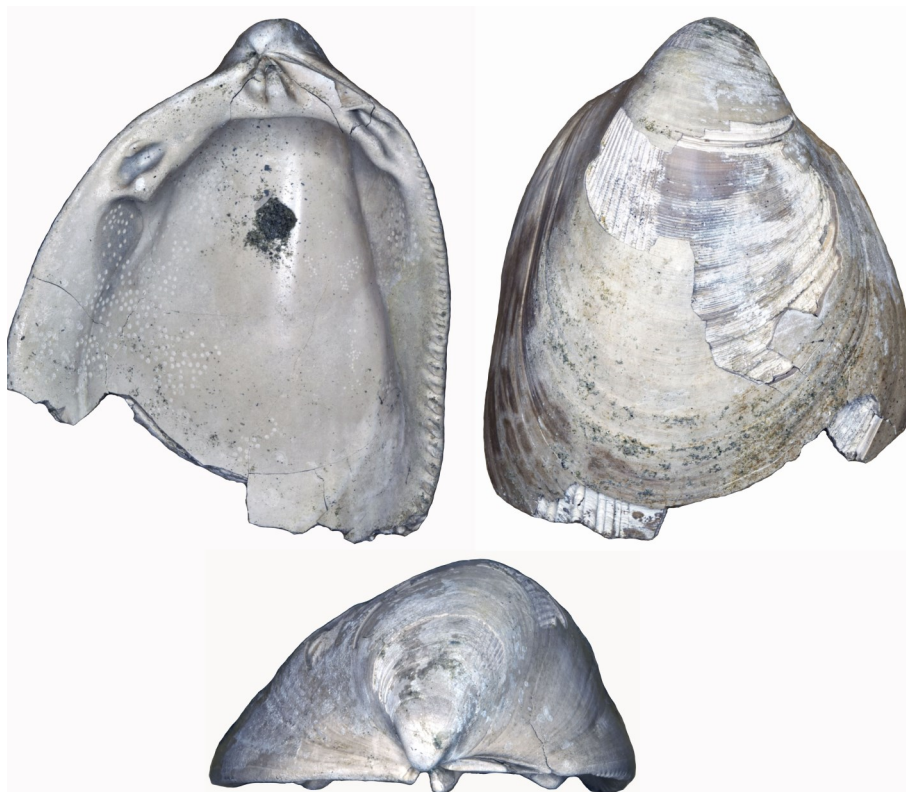


Dreissensia nasuta (Conrad, 1875), left valve, length 9.3 mm, height 15.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2496.



Dreissensia nasuta (Conrad, 1875), left valve, length 11.0 mm, height 18.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2497.

Classs Bivalvia, Subclass Hererodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Cardiida, Superorder Cardiodea, Family Cardiidae,, Genus *Protocardium*, Subgenus *Pachycardium* B008

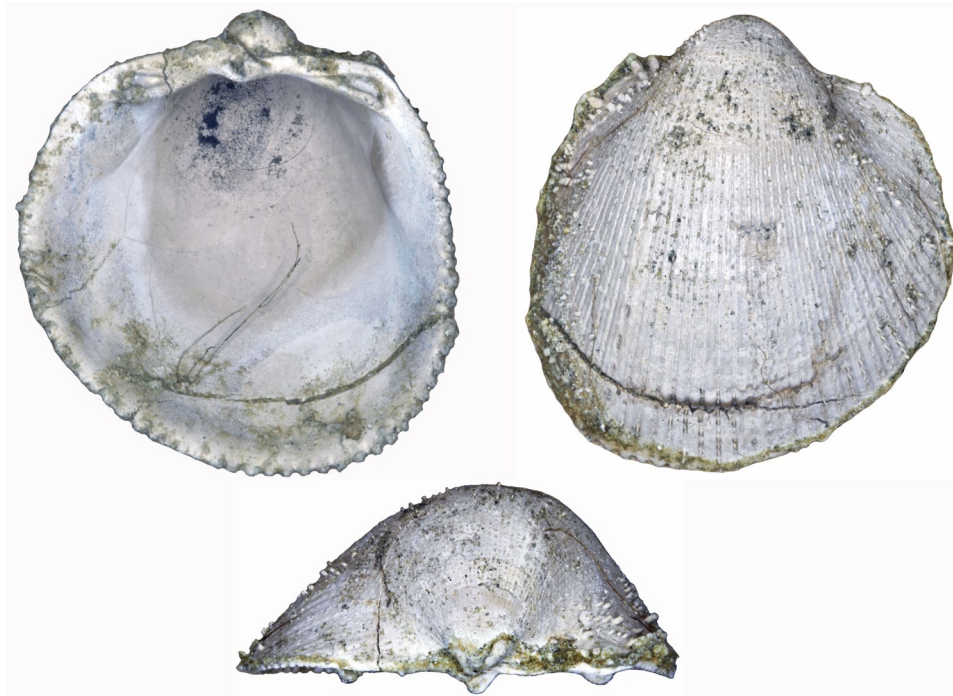


Protocardium (Pachycardium) stantoni Wade, 1926, left valve, incomplete length 46.4 mm, incomplete, height 55.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2498.

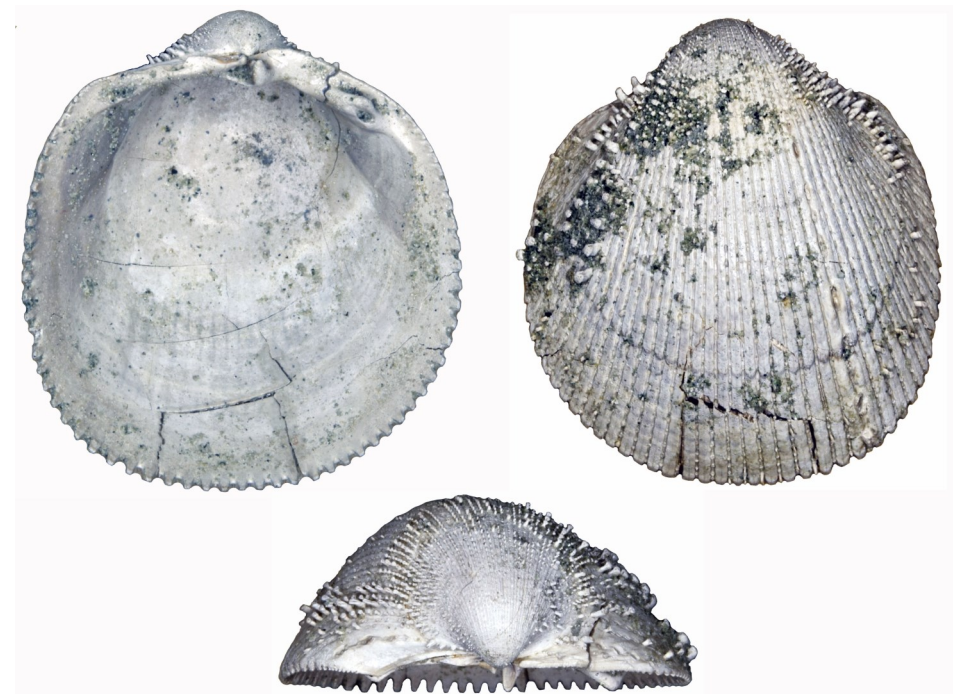


Protocardium (Pachycardium) stantoni (Wade, 1926), both valves, length 43.1 mm, height 57.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2499.

Class Bivalvia, Subclass Hererodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Cardiida, Superorder Cardiodea, Family Cardiidae, Genus *Cardium*, Subgenus *Granocardium* B009.



Cardium (Granocardium) dumosum Conrad, 1876, right valve, length 33.0 mm, height 36.1 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2500.



Cardium (Granocardium) dumosum Conrad, 1876, right valve, length 26.0 mm, height 28.8 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2501.



Cardium (Granocardium) dumosum Conrad, 1876, both valves, length 24.6 mm, height 25.9 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2502.



Cardium (Granocardium) dumosum Conrad, 1876, right valve, length 14.2 mm, height 14.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2503.



Cardium (Granocardium) dumosum Conrad, 1876, left valve, length 13.8 mm, height 14.9 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2504.



Cardium (Granocardium) dumosum Conrad, 1876, left valve, length 16.6 mm, height 17.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2505.



Cardium (Granocardium) dumosum Conrad, 1876, left valve, length 15.5 mm, height 15.9 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2506.

Class Bivalvia, Subclass Hererodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Cardiida, Superorder Cardiodea, Family Cardiidae, Genus *Trachycardium* B010-B012.



Trachycardium carolinensis Conrad, 1875, right valve, length 17.8 mm, height 19.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2507.



Trachycardium carolinensis Conrad, 1875, left valve, length 17.0 mm, height 17.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2508.



Trachycardium cf. *T. vauhani* Stephenson, 1923, left valve, length 16.0 mm, height 17.8 mm, MGS locality 129. MGS figured specimen 2509.



Trachycardium cf. *T. vaughani* Stephenson, 1923, right valve, length 12.8 mm, height 14.6 mm, MGS locality 129. MGS figured specimen 2510.

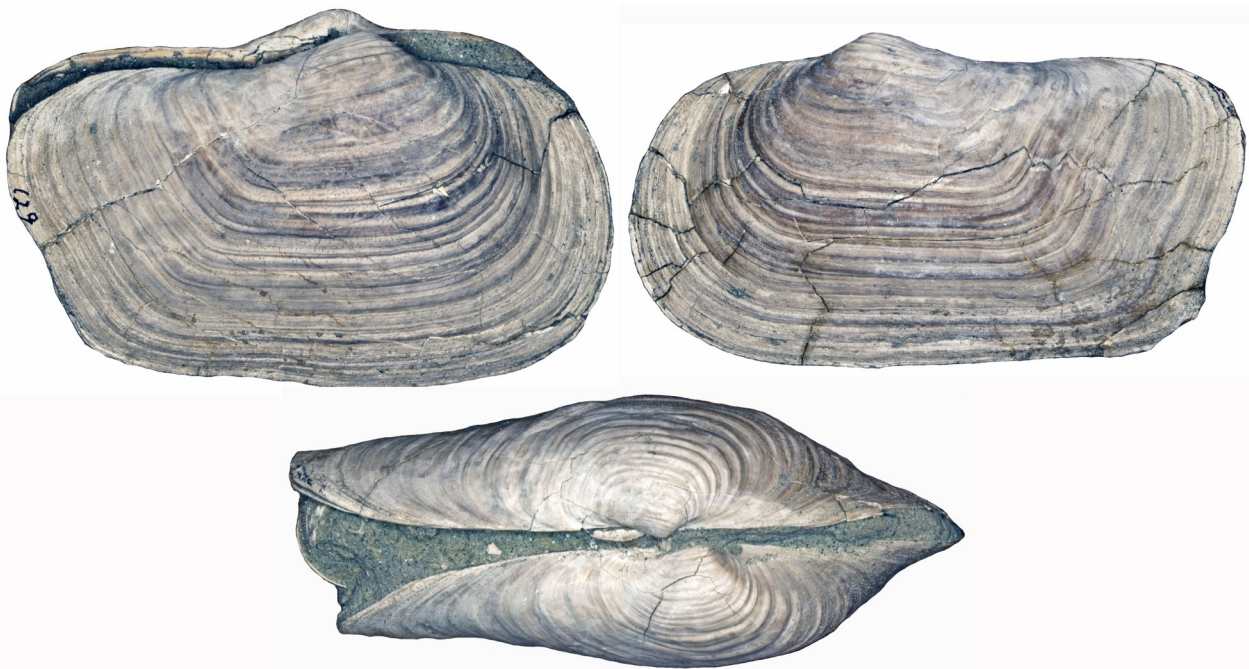


Trachycardium sp., right valve, length 5.5 mm, height 6.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2511.



Trachycardium sp., left valve, length 5.0 mm, height 6.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2512.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Adapedonta, Superfamily Hiatelloidea, Family Hiatellidae, Genus *Panopea* B013.



Panopea decisa Conrad, 1853, both valves, right valve length 88.4 mm, height 52.6 mm, left valve length 88.6 mm, height 50.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2513.



Panopea decisa Conrad, 1853, both valves, right valve length 90.0 mm, height 49.5 mm, left valve length 90.9 mm, height 48.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2514.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Adapedonta, Superfamily Solenoidea, Family Solenidae, Genus Leptosolen B014



Leptosolen biplicata (Conrad, 1858), left valve, length 27.9 mm, height 8.9 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2515.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Superfamily Cyamioidea, Family Sportellidae, Genus *Sportella* B015

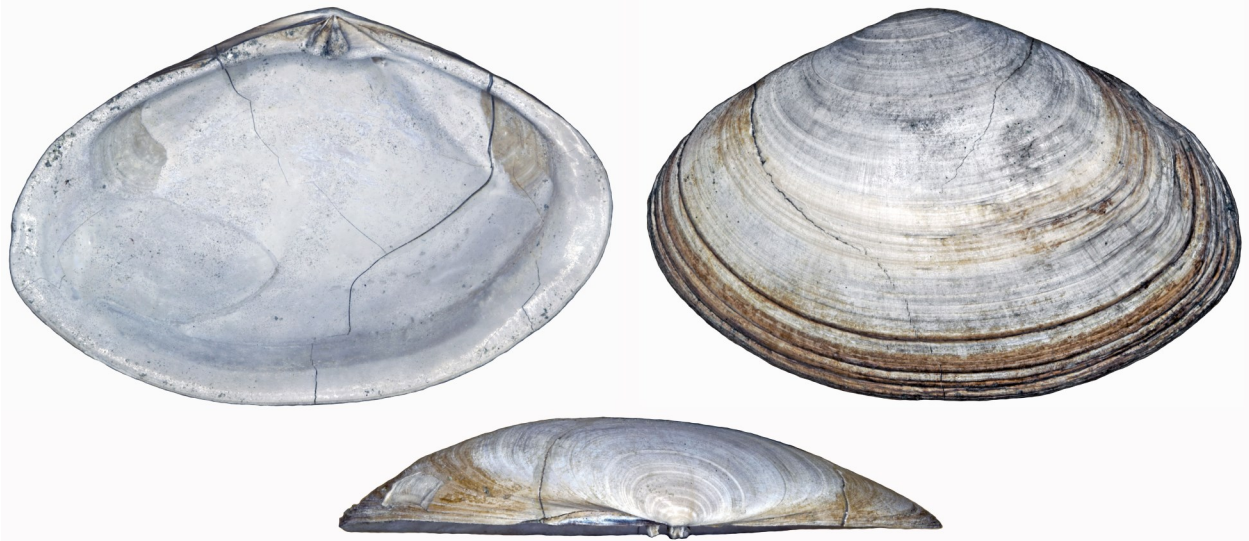


Sportella sp., right valve, length 1.5 mm, height 1.3 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2516, stub 12.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Cardiodea, Superfamily Tellinoidea, Family Tellinidae, Genus *Tellina* B016-B019.



Tellina elliptica (Conrad, 1875), incomplete right valve, length 44.0 mm, height 32.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2517.



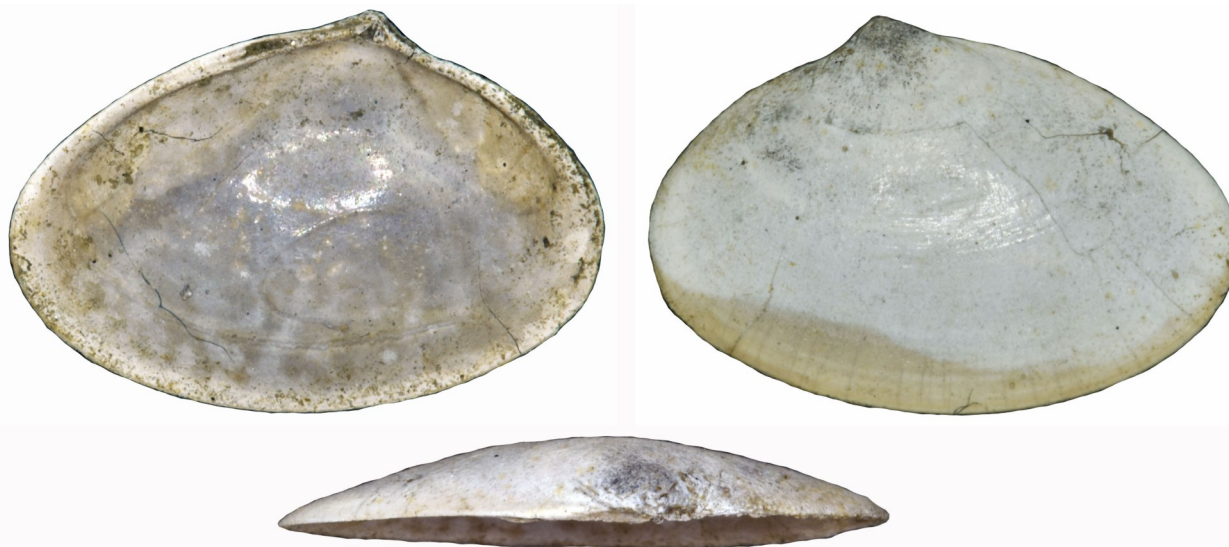
Tellina elliptica (Conrad, 1875), left valve, length 57.0 mm, height 37.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2518.



Tellina sp. A, right valve, length 17.2 mm, height 10.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2519.



Tellina sp. B, left valve, length 17.7 mm, height 11.8 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2520.



Tellina sp. C, left valve, length 14.1 mm, height 9.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2521.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Cardiodea, Superfamily Tellinoidea, Family Tellinidae, Genus *Linearia* B020.



Linearia metastriata Conrad, 1860, right valve, length 15.8 mm, height 11.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2522.



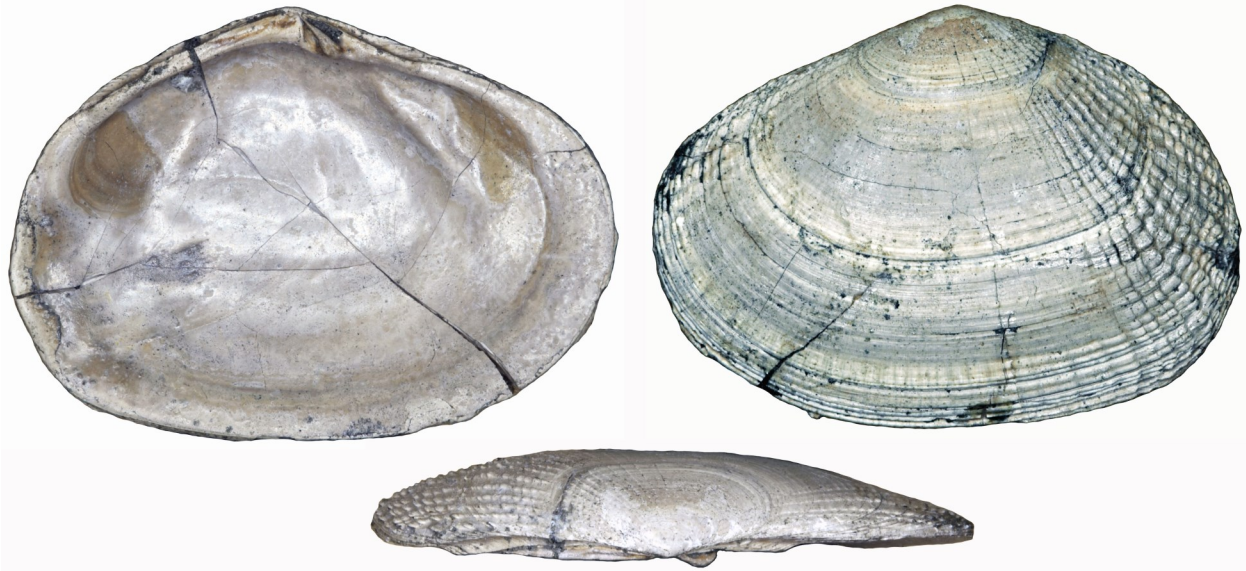
Linearia metastriata Conrad, 1860, left valve, length 17.5 mm, height 13.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2523.



Linearia metastriata Conrad, 1860, left valve, length 18.5 mm, height 14.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2524.

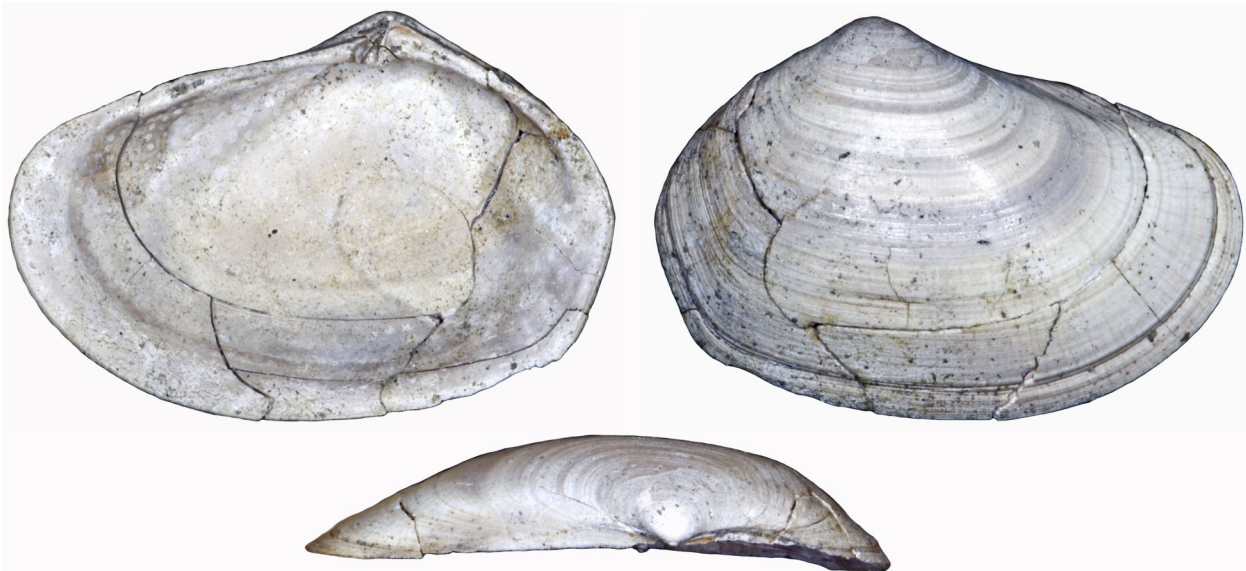


Linearia metastriata Conrad, 1860, left valve, length 16.6 mm, height 12.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2525.



Linearia metastriata Conrad, 1860, left valve, length 39.0 mm, height 27.9 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2526.

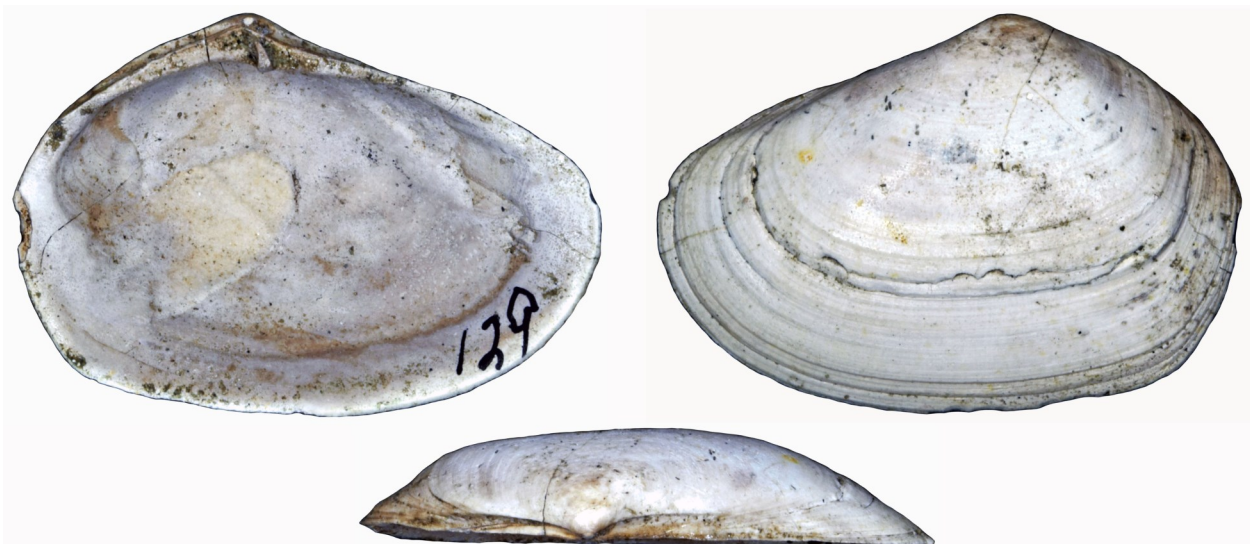
Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Cardiodea, Superfamily Tellinoidea, Family Tellinidae, Genus *Liothyris* B021.



Liothyris carolinensis Conrad, 1875, right valve, length 28.2 mm, height 18.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2527.



Liothyris carolinensis Conrad, 1875, left valve, length 25.5 mm, height 17.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2528.



Liothyris carolinensis Conrad, 1875, left valve, length 27.0 mm, height 18.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2529.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Superfamily Gastrochaenoidea, family Gastrochaenidae, Genus *Eufistulana* B022.

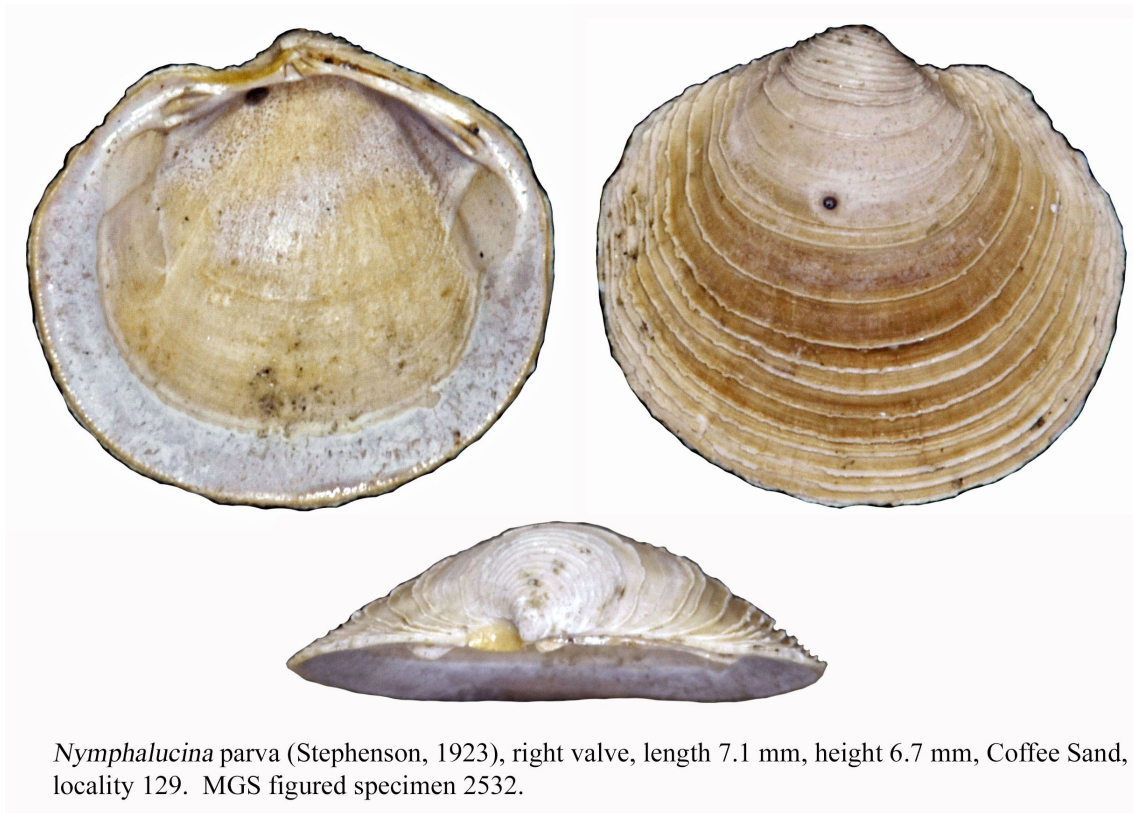


Eufistulana ripleyana (Stephenson, 1941), left valve (incomplete), length 6.0 mm, height 4.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2530.

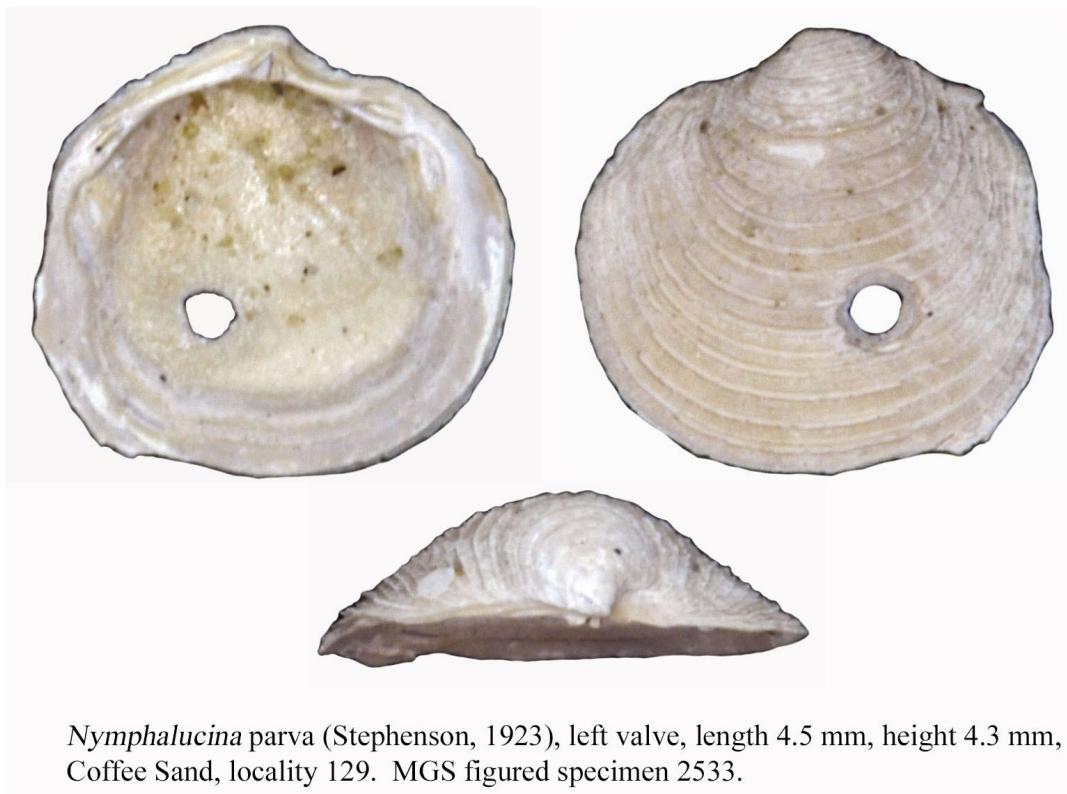


Eufistulana ripleyana (Stephenson, 1941), length of tube 79.9 mm, greatest diameter at base 11.9 mm, greatest diameter at top 5.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2531.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Lucinida, Superfamily Lucinoidea, Family Lucinidae, Genus *Nymphalucina* B023.



Nymphalucina parva (Stephenson, 1923), right valve, length 7.1 mm, height 6.7 mm, Coffee Sand, locality 129. MGS figured specimen 2532.



Nymphalucina parva (Stephenson, 1923), left valve, length 4.5 mm, height 4.3 mm, Coffee Sand, locality 129. MGS figured specimen 2533.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Lucinida, Superfamily Lucinoidea, Family Lucinidae, Genus *Brachymeris* B024.



Brachymeris carolinensis (Conrad, 1875), right valve, length (incomplete) 6.5 mm, height 6.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2534.



Brachymeris carolinensis (Conrad, 1875), left valve, length 5.9 mm, height 5.1 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2535.

Class Bivalvia, Subclass Hereodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Myida Superfamily Myoidea, Family Corbulidae, Genus *Caryocorbula* B025.

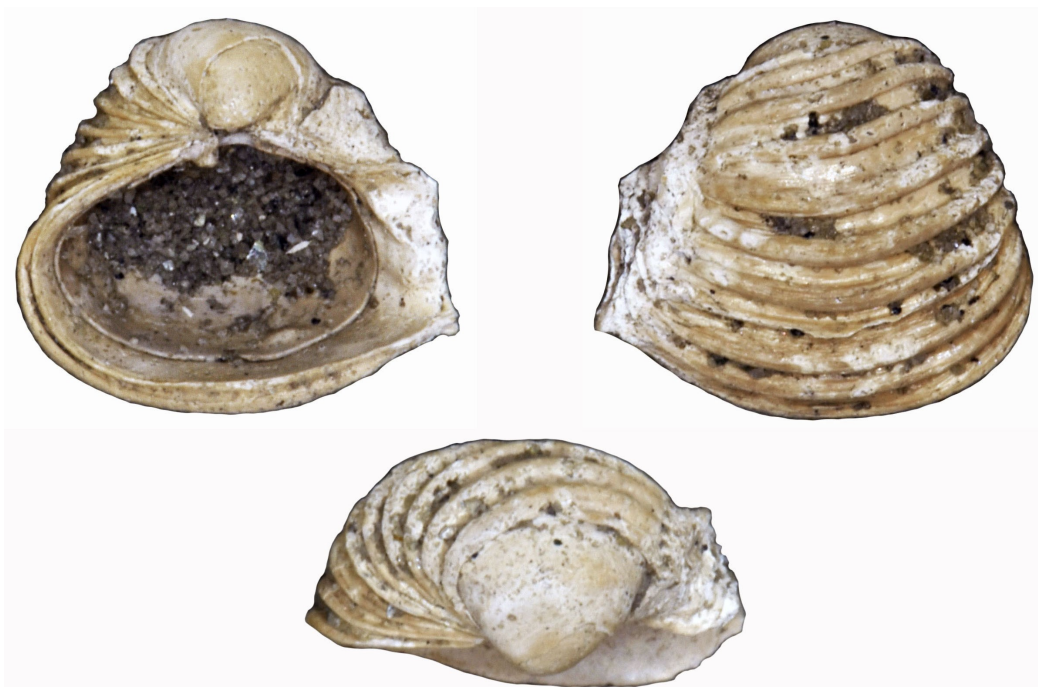


Caryocorbula carolinensis (Conrad, 1875), both valves, right valve length 11.9 mm, height 8.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2536.



Caryocorbula carolinensis (Conrad, 1875), both valves, right valve length 9.6, height 6.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2537.

Class Bivalvia, Subclass Hereodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Myida Superfamily Myoidea, Family Corbulidae, Genus *Caestocorbula* B026.



Caestocorbula crassiplica Gabb, 1860, right valve, length 6.2 mm, height 6.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2538.



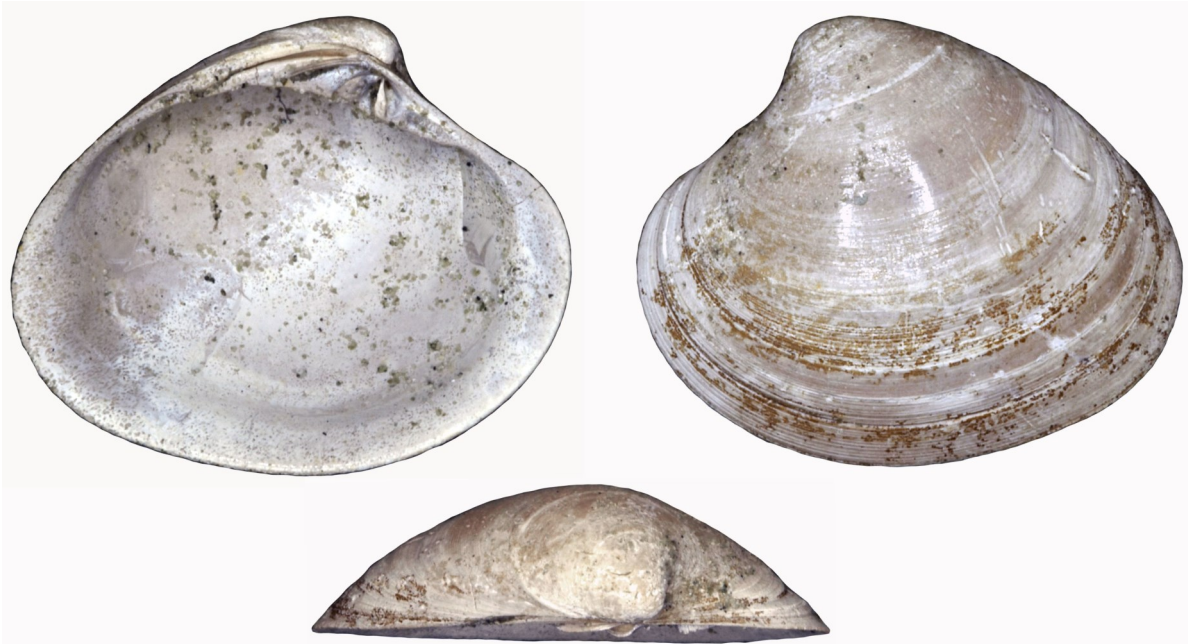
Caestocorbula crassiplica Gabb, 1860, both valves, right valve length 5.3 mm, height 4.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2539.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Myida, Superfamily Pholadoidea, Family Teredinidae, Genus *Teredo* B027.



Teredo sp. tubes in sand matrix replacing wood, some lignite still present, length of matrix sample as shown 61.5 mm, height 52.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2540.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Venerida, Superfamily Veneroidea, Family Veneridae, Genus *Aphrodina* B023-B030.



Aphrodina regia Conrad, 1875, left valve, length 20.2 mm, height 16.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2541.



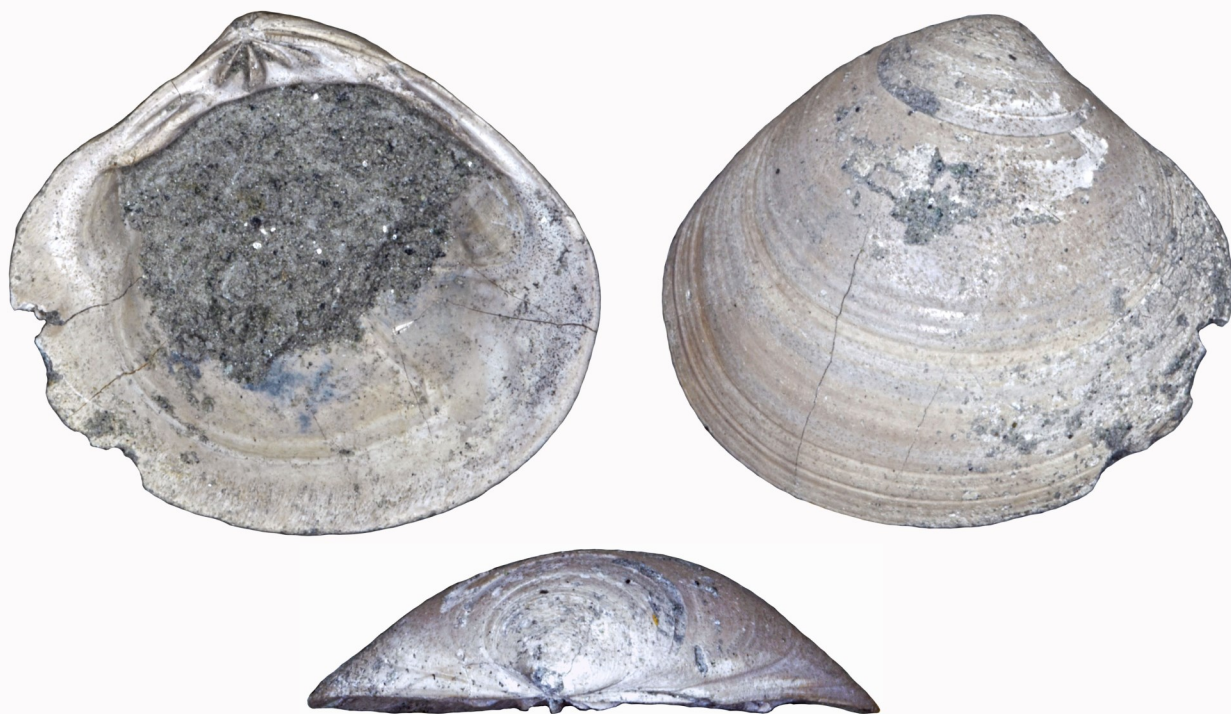
Aphrodina regia Conrad, 1875, incomplete left valve, length 35.0 mm, height 33.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2542.



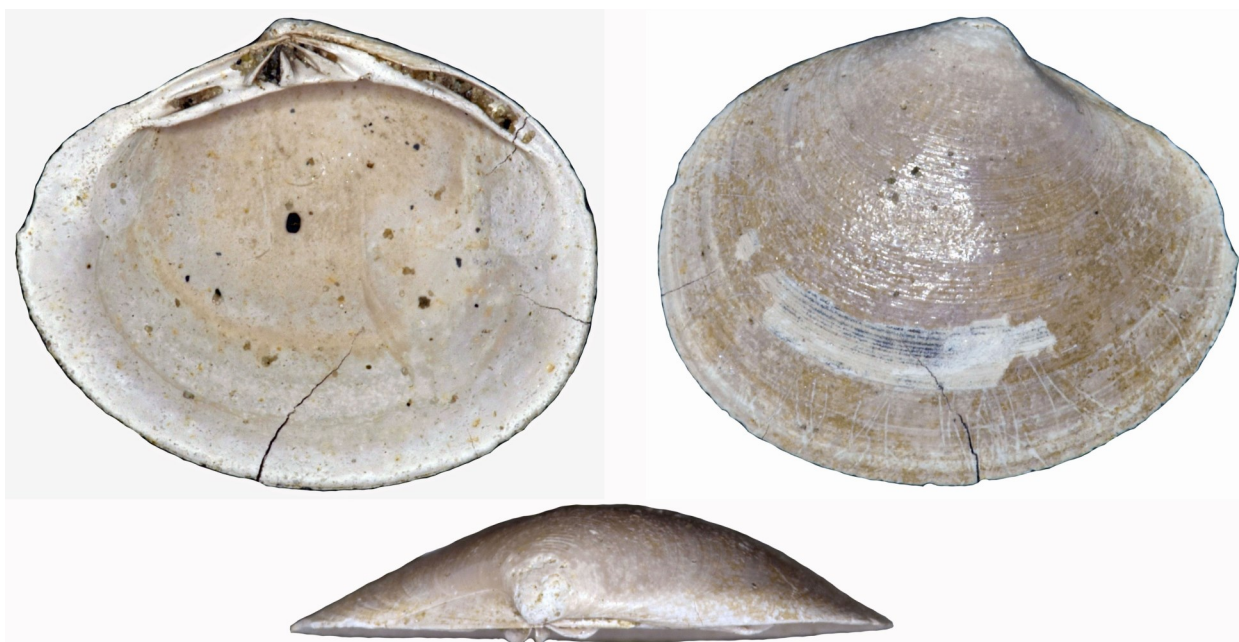
Aphrodina sp. A, right valve, length 33.5 mm, height 27.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2543.



Aphrodina sp. A, left valve, length 35.7 mm, height 29.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2544.



Aphrodina sp. B, right valve, length 25.2 mm, height 22.5, Coffee Sand, MGS locality 129. MGS figured specimen 2545.



Aphrodina sp. B, juvenile, right valve, shell broken after photography, Coffee Sand, MGS locality 129. MGS figured specimen 2546.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Venerida, Superfamily Veneroidea, Family Veneridae, Genus *Cyprimeria* B031-B032.



Cyprimeria alta Conrad, 1875, both valves showing right valve, length 75.5 mm, height 70.8 mm, Coffee Sand, MGS locality 129, upper clay bed. MGS figured specimen 2547.



Cyprimeria alta Conrad, 1875, both valves showing left valve, length 75.0 mm, height 71.8 mm, Coffee Sand, MGS locality 129, upper clay bed. MGS figured specimen 2548.



Cyprimeria alta Conrad, 1875, left valve, length 79.4 mm, height 73.4 mm, bore hole 6.0 mm exterior diameter, 3.3 mm interior diameter, Coffee Sand, MGS locality 129, upper clay bed. MGS figured specimen 2549.



Cyprimeria alta Conrad, 1875, left valve, length 24.8 mm, height 23.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2550.



Cyprimeria depressa (Conrad, 1860), right valve, length 29.6 mm, height 21.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2551.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Venerida, Superfamily Veneroidea, Family Veneridae, Genus *Legumen* B033.



Legumen planulatum (Conrad, 1853), both valves, length 30.9 mm, height 13.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2552.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Venerida, Superfamily Veneroidea, Family Arcticidae, Genus *Etea* B034-B35.



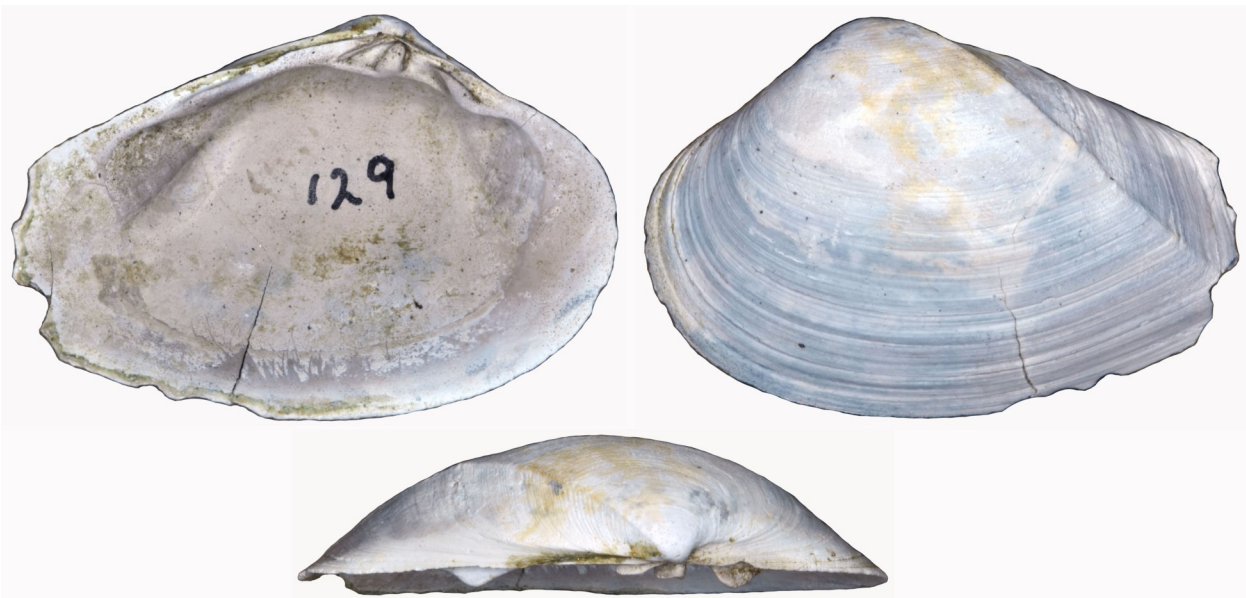
Etea carolinensis Conrad, 1875, both valves, length 31.4 mm, height 21.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2553.



Etea carolinensis Conrad, 1875, both valves, length 33.5 mm, height 21.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2554.



Etea carolinensis Conrad, 1875, right valve, length 32.9 mm, height 21.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2555.



Etea carolinensis Conrad, 1875, left valve, length 32.0 mm, height 21.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2556.



Etea carolinensis Conrad, 1875, left valve, length 31.2 mm, height 20.8 mm, Coffee Sand, MGS locality 128. MGS figured specimen 2557.



Etea sp., left valve, length 32.3 mm, height 16.9 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2558.

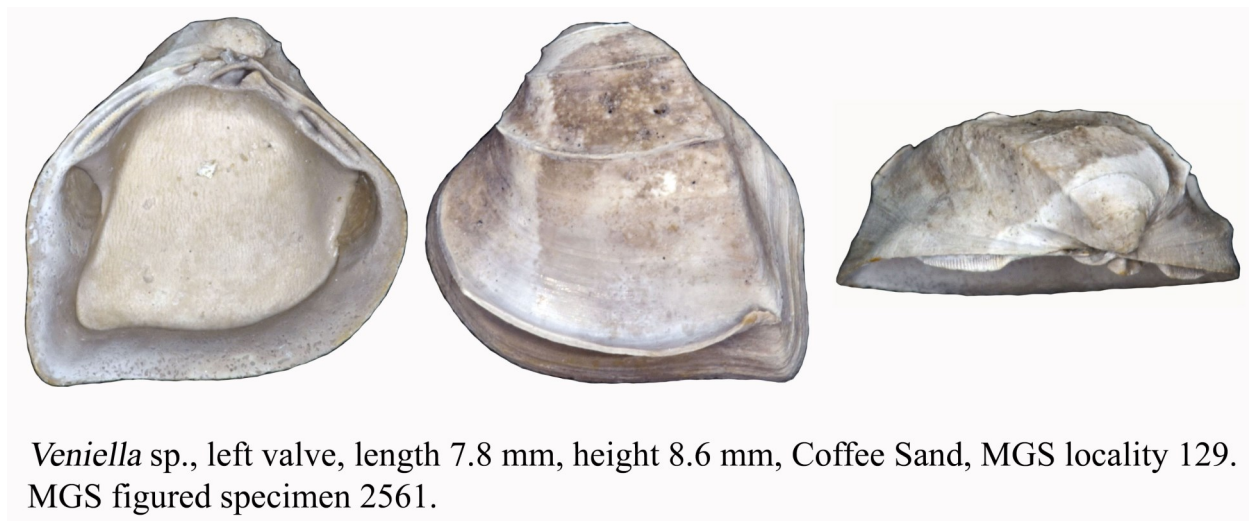


Etea sp., left valve, length 25.3 mm, height 14.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2559.

Class Bivalvia, Subclass Heterodonta, Infraclass Euheterodonta, Superorder Imparidentia, Order Venerida, Superfamily Veneroidea, Family Arcticidae, Genus *Veniella* B038.



Veniella sp., right valve, length 7.0 mm, height 8.8 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2560.



Veniella sp., left valve, length 7.8 mm, height 8.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2561.



Veniella sp., right valve, length 15.5 mm, height 16.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2562.



Veniella sp., left valve, length 13.2 mm, height 14.1 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2563.



Veniella conradi (Morton, 1833), right valve, length 50.2 mm, height 47.7 mm, Coon Creek Tongue of the Ripley Formation, type locality on Coon Creek in McNairy County, Tennessee. MGS figured specimen 2564.



Veniella conradi (Morton, 1833), both valves, length 35.8 mm, height 34.3 mm, Owl Creek Formation, MGS locality 126a. MGS figured specimen 2565.

Class Bivalvia, Subclass Palaeoheterodonta, Order Trigoniida, Superfamily Trigonioidea, Family Trigoniidae, Subfamily Trigoniinae, Genus *Trigonia* B039.



Trigonia eufaulensis Gabb, 1860, right valve, length 14.0 mm, height 11.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2566.



Trigonia eufaulensis Gabb, 1860, right valve, length 18.4 mm, height 14.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2567.



Trigonia eufaulensis Gabb, 1860, both valves, length 15.5 mm, height 11.8 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2568.



Trigonia eufaulensis Gabb, 1860, both valves, length 10.2 mm, height 8.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2569.

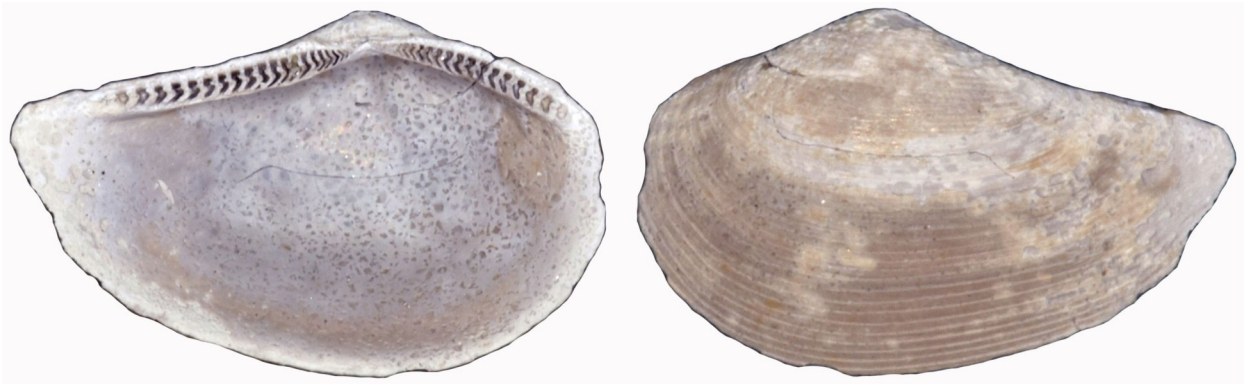
Class Bivalvia, Subclass Protobranchia, Order Nuculanida, Superfamily Nuculanoidea, Family Nuculanidae, Genus *Nuculana* B040.



Nuculana cf. *N. tarensis* (Stephenson, 1923), right valve, length 6.0 mm, height 3.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2570.



Nuculana cf. *N. tarensis* (Stephenson, 1923), left valve, length 5.0 mm, height 3.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2571.



Nuculana cf. N. tarensis (Stephenson, 1923), left valve, shell broken after photographed, Coffee Sand, MGS locality 129. MGS figured specimen 2572.

Class Bivalvia, Subclass Protobranchia, Order Nuculanida, Superfamily Nuculanoidea, Family Nuculanidae, Genus *Yoldia* B041.

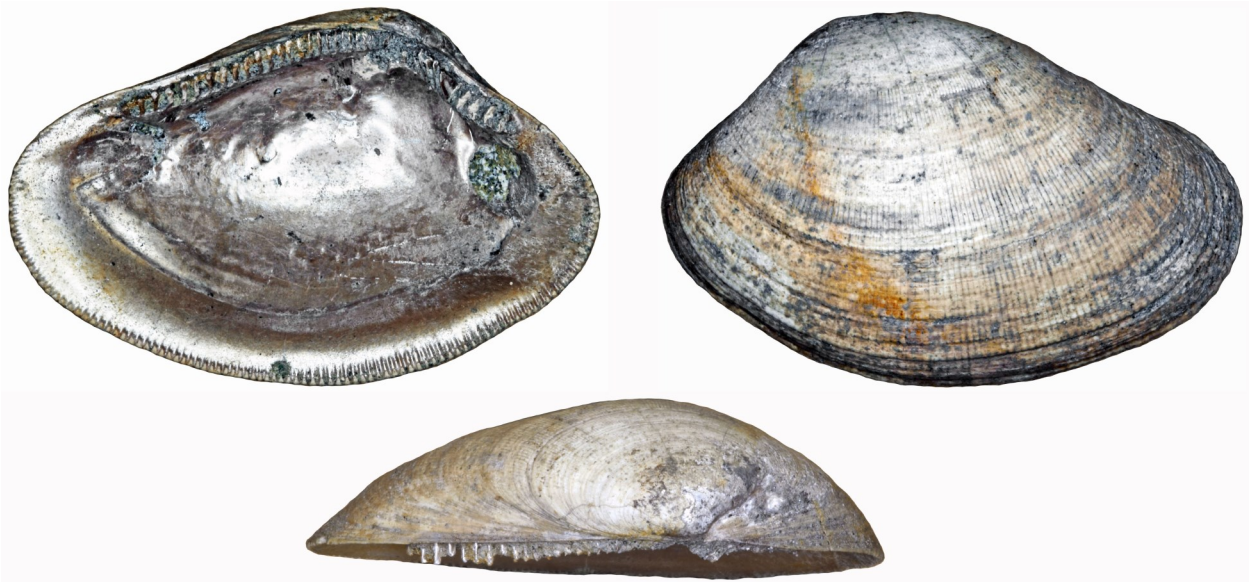


Yoldia sp., right valve, length 17.3 mm, height 6.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2573.



Yoldia sp., left valve, incomplete length 17.1 mm, height 6.9 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2574.

Class Bivalvia, Subclass Protobranchia, Order Nuculida, Superfamily Nuculoidea, Family Nuculidae, Genus *Nucula* B042-B043.



Nucula percrassa Conrad, 1856, right valve, length 39.0 mm, height 25.3 mm, Coffee Sand, MGS locality 128. MGS figured specimen 2575.



Nucula percrassa Conrad, 1856, right valve, length 23.6 mm, height 17.3 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2576.



Nucula percrassa Conrad, 1856, left valve, length 25.0 mm, height 18.3 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2577.



Nucula percrassa Conrad, 1856, variety, right valve, length 23.2 mm, height 15.1 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2578.



Nucula percrassa Conrad, 1856, both valves, length 20.6 mm, height 14.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2579.



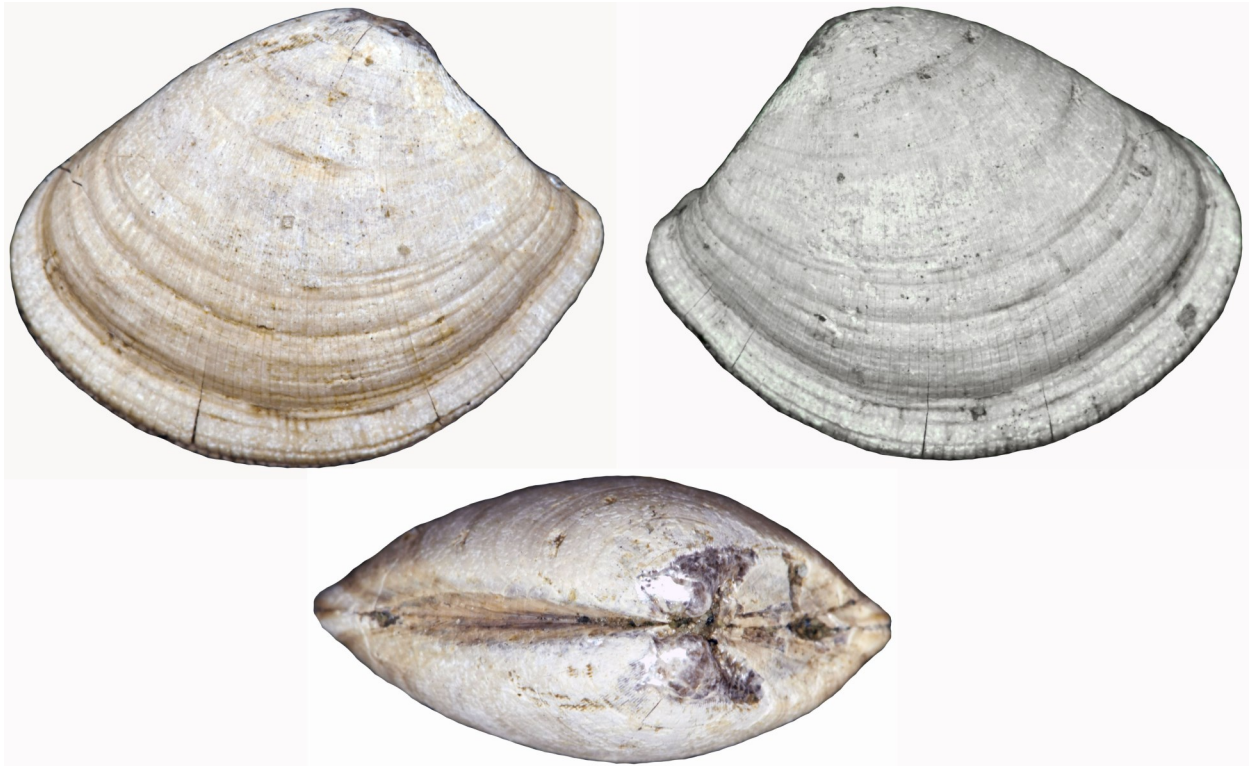
Nucula percrassa Conrad, 1856, both valve, length 16.2 mm, height 11.5 mm, Coffee Sand, MGS locality 128. MGS figured specimen 2580.



Nucula stantoni Stephenson, 1923, right valve, length 12.3 mm, height 9.6 mm, Coffee Sand, MGS locality129. MGS figured specimen 2581.



Nucula stantoni Stephenson, 1923, left valve, length 12.3 mm, height 9.6 mm, Coffee Sand, MGS locality129. MGS figured specimen 2582.

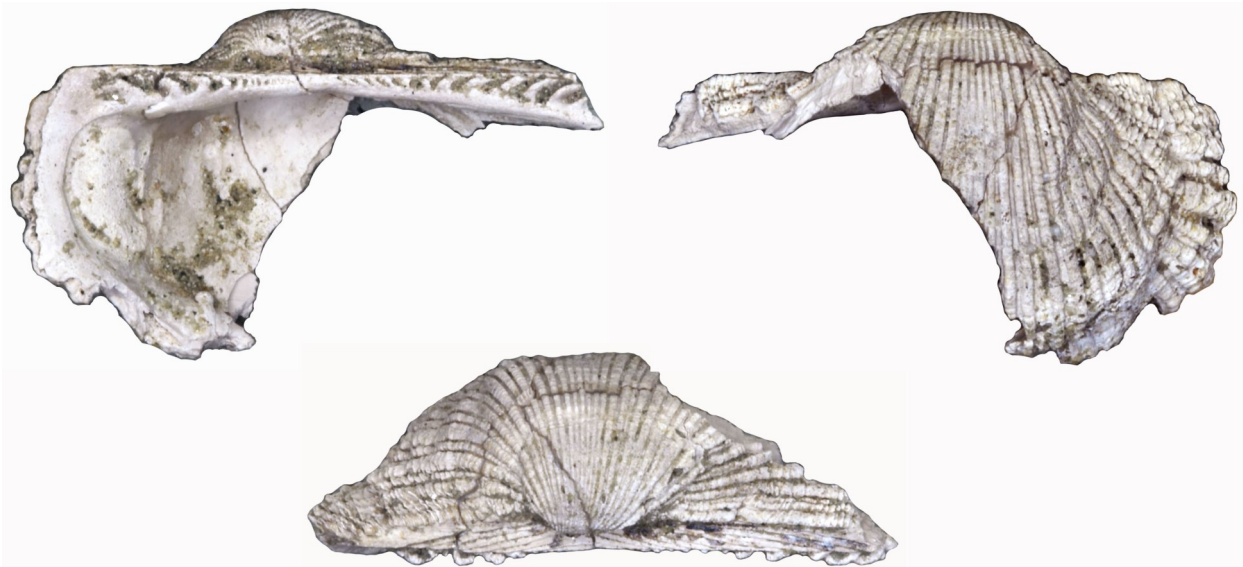


Nucula stantoni Stephenson, 1923, both valve, length 11.3 mm, height 8.7 mm, Coffee Sand, MGS locality129. MGS figured specimen 2583.



Nucula stantoni Stephenson, 1923, both valve, length 11.4 mm, height 8.7 mm, Coffee Sand, MGS locality129. MGS figured specimen 2584.

Class Bivalvia, Subclass Pteriomorphia, Order Archida, Superfamily Arcoidea, Family Arcidae, Genus *Arca* B044.



Arca securiculata Wade, 1926, right valve, fragment length 22.6 mm, height 14.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2585.

Class Bivalvia, Subclass Pteriomorphia, Order Archida, Family Arcidae, Superfamily Arcoidea, Genus *Breviarca* B045-B047.



Breviarca umbonata Conrad, 1875, right valve, length 7.8 mm, height 6.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2586.



Breviarca umbonata Conrad, 1875, left valve, length 8.2 mm, height 7.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2587.



Breviarca umbonata Conrad, 1875, right valve, length 13.2 mm, height 11.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2588.



Breviarca umbonata Conrad, 1875, left valve, length 13.7 mm, height 11.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2589.



Breviarca umbonata Conrad, 1875, both valves, length 13.3 mm, height 10.3 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2590.



Breviarca sp. A, right valve, length 5.5 mm, height 4.3 mm, Coffee Sand, MGS locality 219. MGS figured specimen 2591.



Breviarca sp. A, left valve, length 4.5 mm, height 3.5 mm, Coffee Sand, MGS locality 219. MGS figured specimen 2592.



Breviarca sp. B, right valve, length 6.8 mm, height 4.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2593.

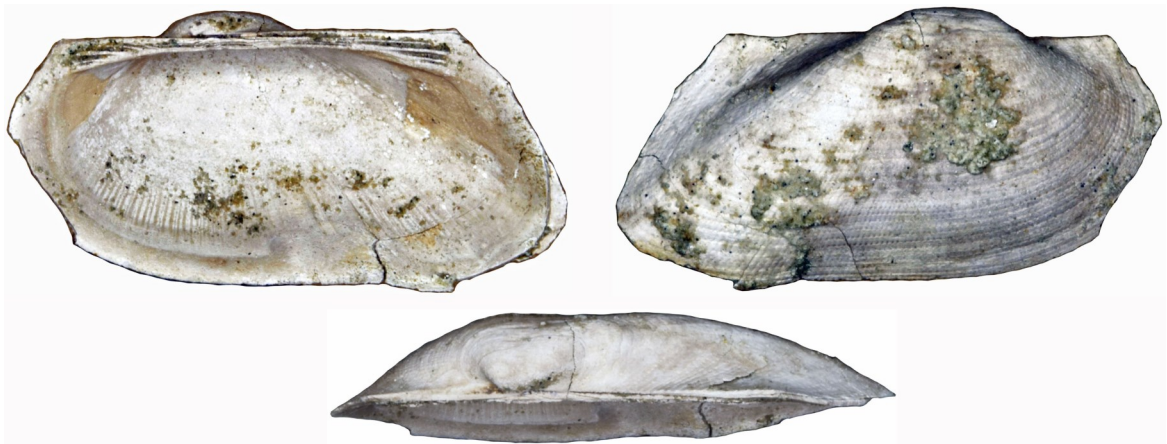
Class Bivalvia, Subclass Pteriomorphia, Order Archida, Superfamily Arcoidea, Family Parallelodonridae, Genus *Nemodon* B048.



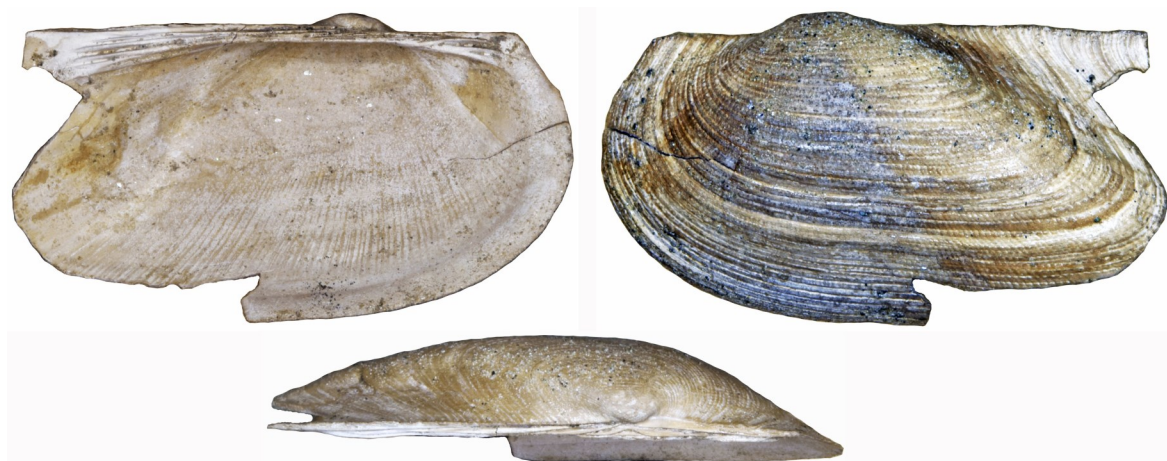
Nemodon eufaulensis (Gabb, 1860), left valve, length 59.0 mm, height 33.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2594.



Nemodon eufaulensis (Gabb, 1860), right valve, length 38.1 mm, height 20.0 mm, Coffee Sand, MGS locality 128. MGS figured specimen 2595.



Nemodon eufaulensis (Gabb, 1860), right valve, length 24.0 mm, height 12.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2596.



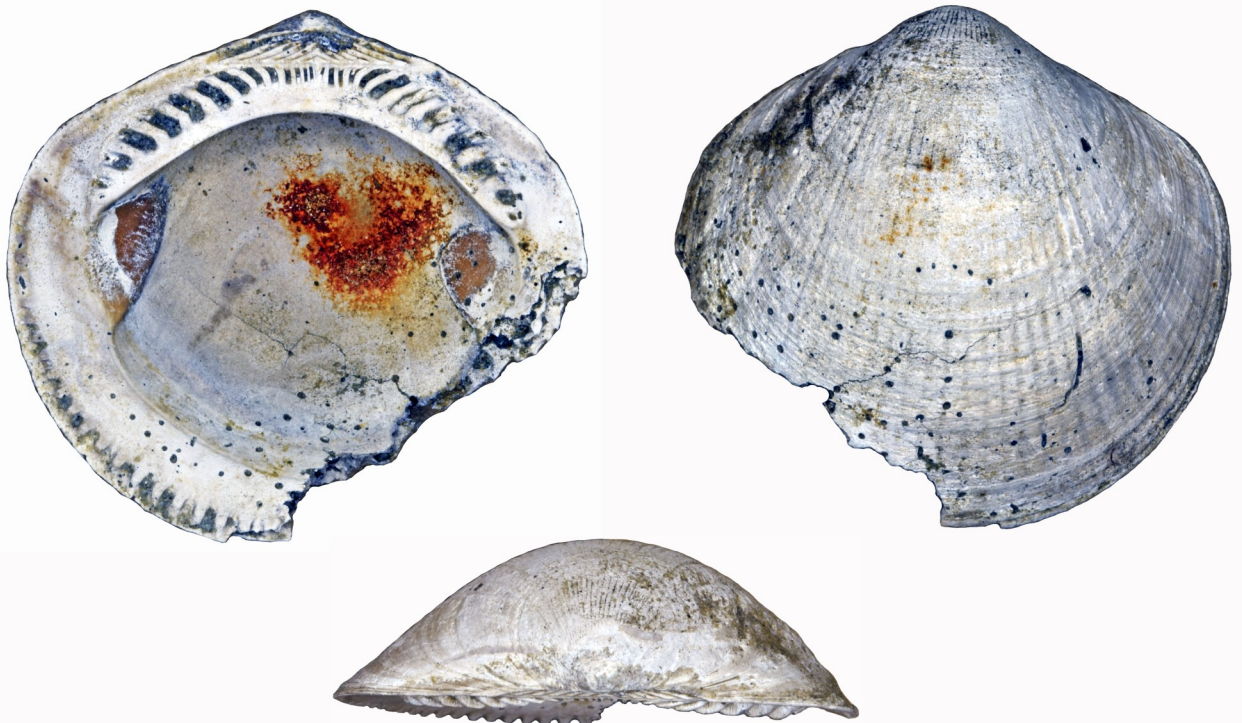
Nemodon eufaulensis (Gabb, 1860), incomplete left valve, length 35.9 mm, height 19.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2597.

Class Bivalvia, Subclass Pteriomorphia, Order Archida, Superfamily Arcoidea, Family Arcidae, Genus *Linter* B049.

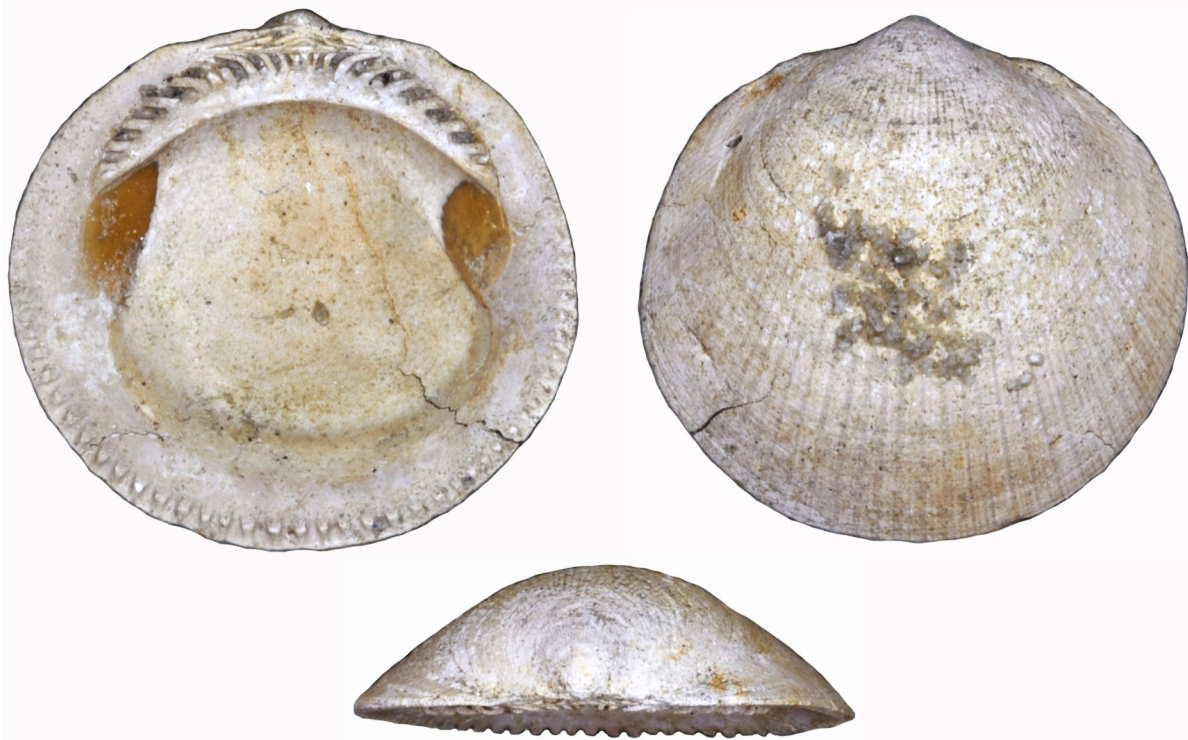


Linter sp. ?, right valve, length 7.5 mm, height 4.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2598.

Class Bivalvia, Subclass Pteriomorphia, Order Arcida, Superfamily Arcoidea, Family Glycymerididae, Genus *Glycymeris* B050.



Glycymeris lacertosa (Wade, 1926), right valve, incomplete length 36.0 mm, height 33.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2599.

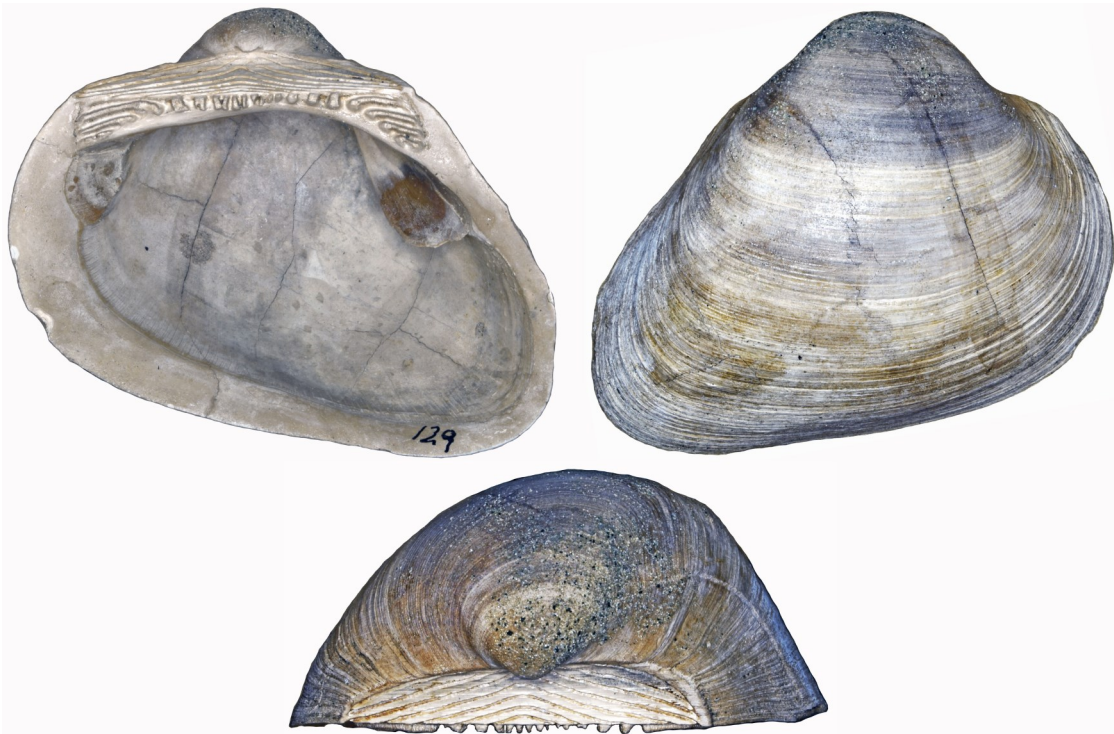


Glycymeris whitleyensis Stephenson, 1923, right valve, length 18.7 mm, height 17.8 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2600.



Glycymeris whitleyensis Stephenson, 1923, left valve, length 22.2 mm, height 20.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2601.

Class Bivalvia, Subclass Pteriomorpha, Order Arcida, Superfamily Arcoidea, Family Cucullaeidae, Genus *Cucullaea*, Subgenus (*Idonearea*) B051-52.



Cucullaea (Idonearca) capax Conrad, 1858, right valve, length 60.3mm, height 54.5 mm, MGS locality 129. MGS figured specimen 2602.



Cucullaea (Idonearca) capax Conrad, 1858, left valve, length 61.7 mm, height 54.6 mm, MGS locality 129. MGS figured specimen 2603.



Cucullaea (Idonearca) carolinensis Gabb, 1876, right valve, length 57.8 mm, height 55.8 mm, MGS locality 129. MGS figured specimen 2604.



Cucullaea (Idonearca) carolinensis Gabb, 1876, left valve, length 61.0 mm, height 54.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2605.



Cucullaea (Idonearca) capax Conrad, 1858, right valve, length 59.0mm, height 56.4 mm, MGS locality 129. MGS figured specimen 2606.



Cucullaea (Idonearca) carolinensis Gabb, 1876, both valves, length 62.6 mm, height 59.2 mm, MGS locality 129. MGS figured specimen 2607.

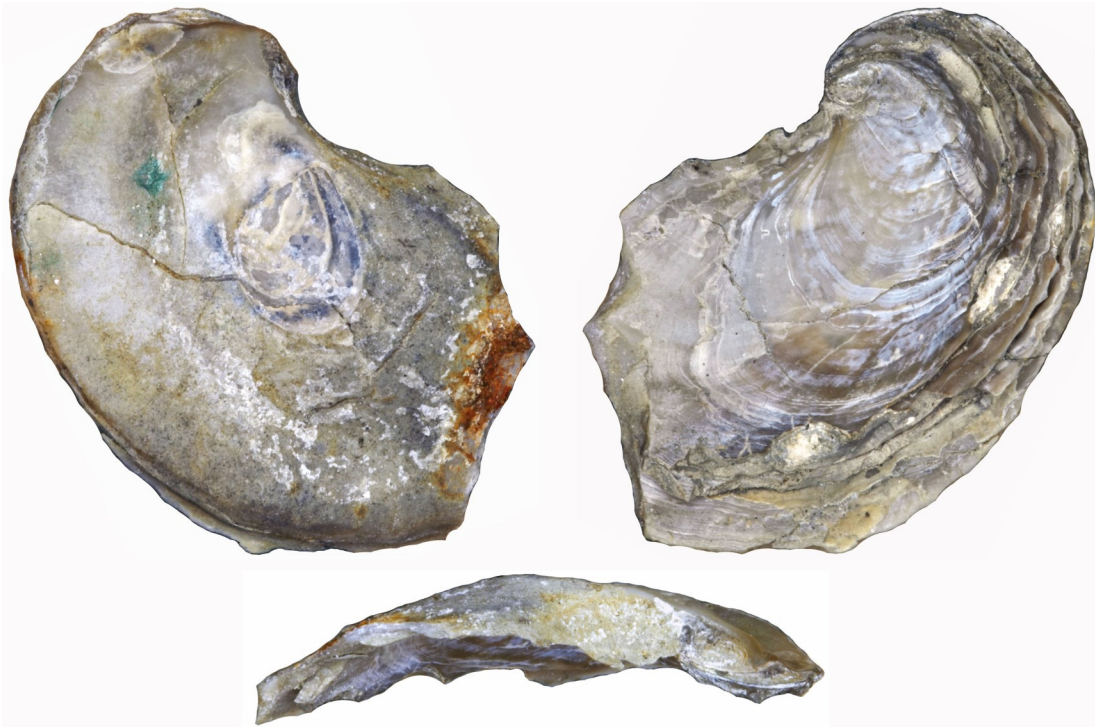


Cucullaea (Idonearca) carolinensis Gabb, 1876, juvenile right valve, length 8.9 mm, height 7.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2608.

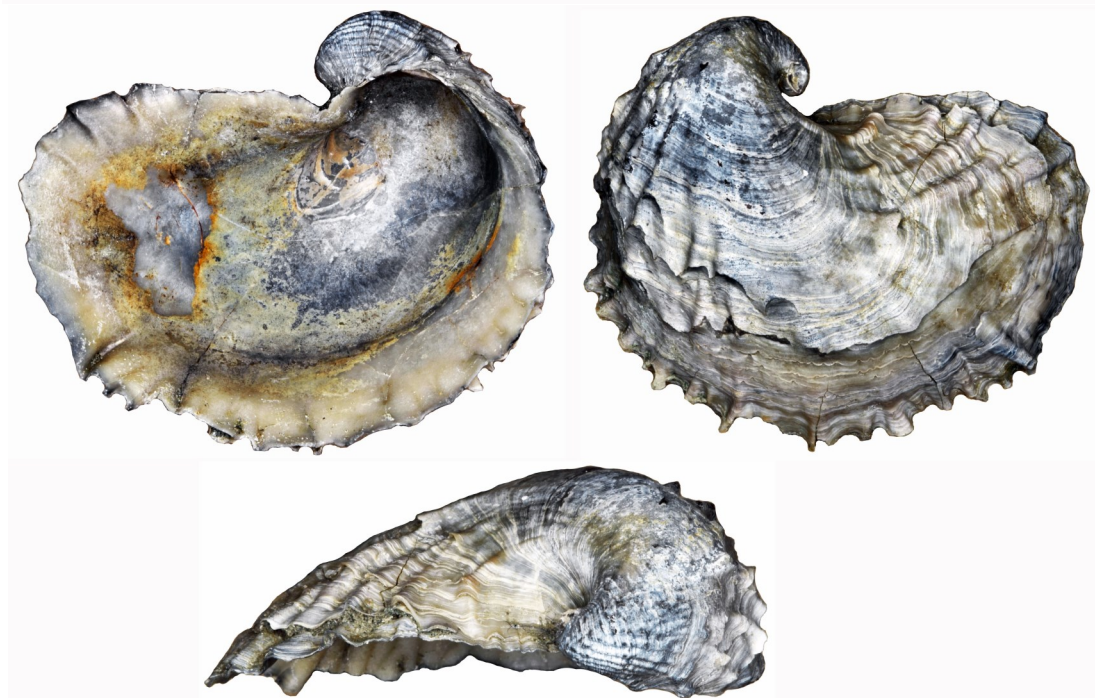


Cucullaea (Idonearca) carolinensis Gabb, 1876, juvenile left valve, length 8.6 mm, height 7.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2609.

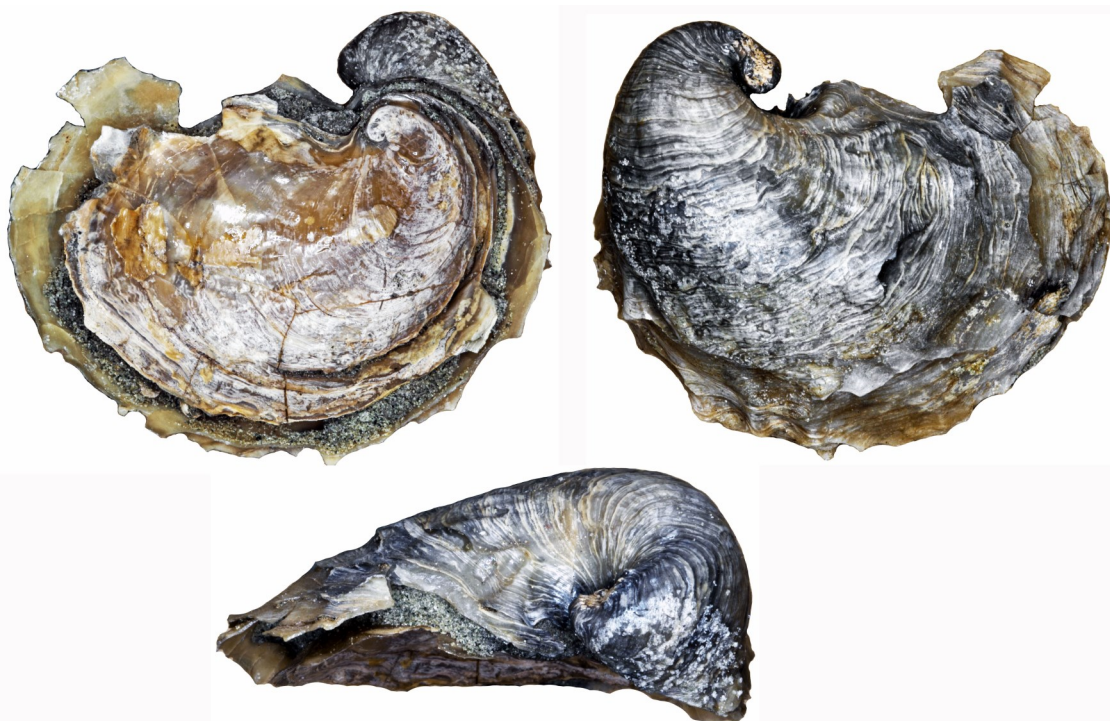
Class Bivalvia, Subclass Pteriomorphia, Order Ostreida, Superfamily Ostreoidea, Family Gryphaeidae, Subfamily Exogyrinae, Genus *Exogyra* B053-54.



Exogyra erraticostata Stephenson, 1914, right valve, length 28.2 mm, height 29.1, Coffee Sand, MGS locality 129. MGS specimen 2610a.



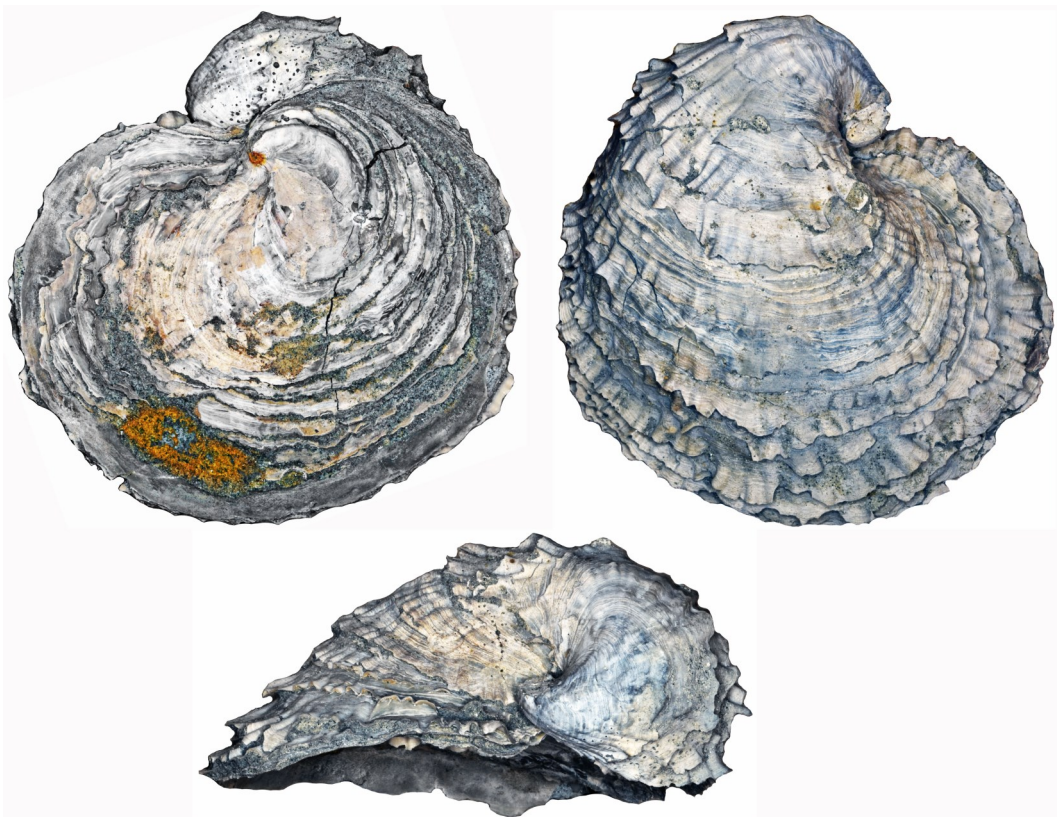
Exogyra erraticostata Stephenson, 1914, left valve, length 46.0 mm, height 30.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2610b.



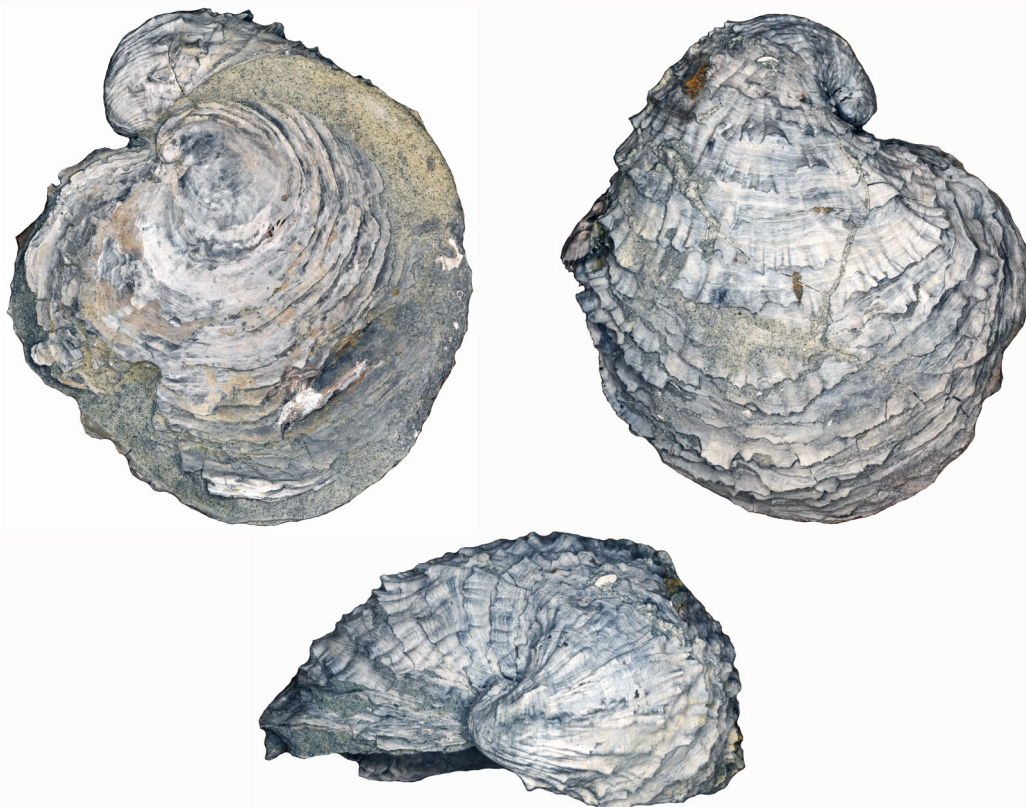
Exogyra erraticostata Stephenson, 1914, both valves, length 45.3 mm, height 38.9 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2611.



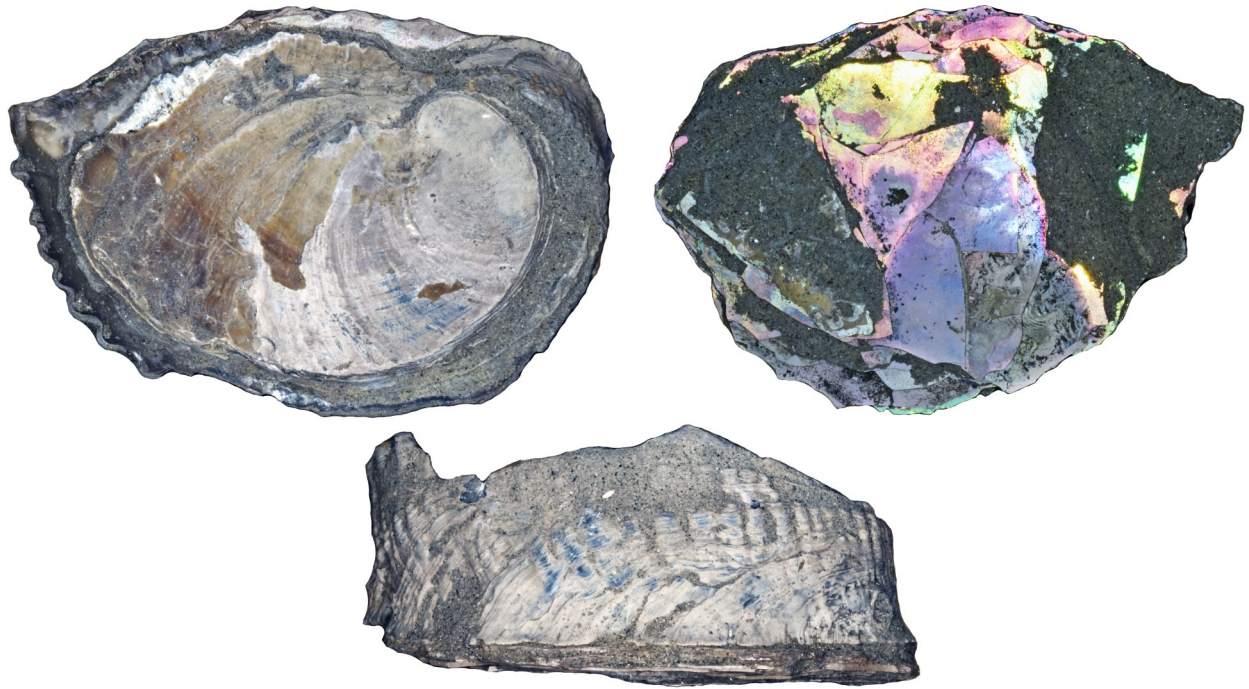
Exogyra erraticostata Stephenson, 1914, both valves with left valve attached to *Turritella*, length of oyster 58.8 mm, height 57.3 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2612.



Exogyra erraticostata Stephenson, 1914, both valves, length 100.0 mm, height 101.3 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2613.

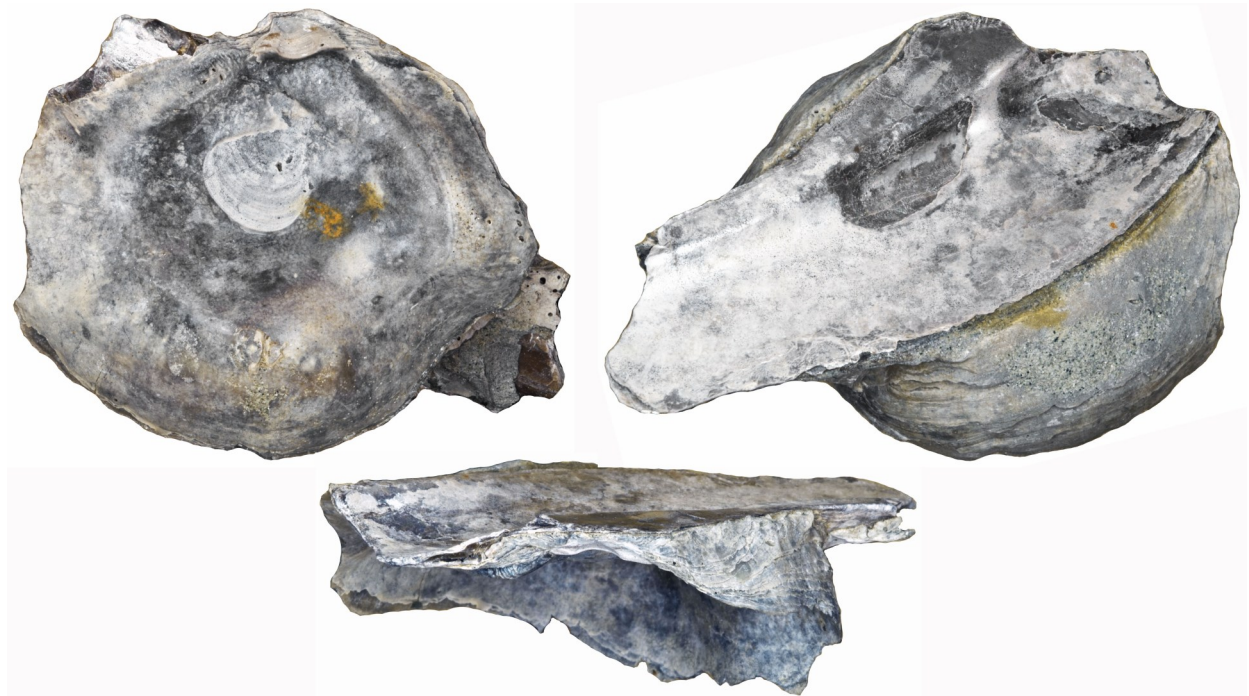


Exogyra erraticostata Stephenson, 1914, both valves, length 140.0 mm, height 120.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2614.



Exogyra sp. both valves, broadly attached to a *Placenticeras* shell, length 74.5 mm, height 48.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2615.

Class Bivalvia, Subclass Pteriomorphia, Order Ostreida, Superfamily Ostreoidea, Family Gryphaeidae, Subfamily Pycnodonteinae, Genus *Pycnodonte* B055.



Pycnodonte mutabilis (Morton, 1828), left valve attached to *Gervillioopsis* shell, length 52.5 mm, height 45.2 mm, MGS locality 129. MGS figured specimen 2616.

Class Bivalvia, Subclass Pteriomorpha, Order Ostreida, Superfamily Ostreoidea, Family Ostreidae, Genus *Agerostrea* B056.



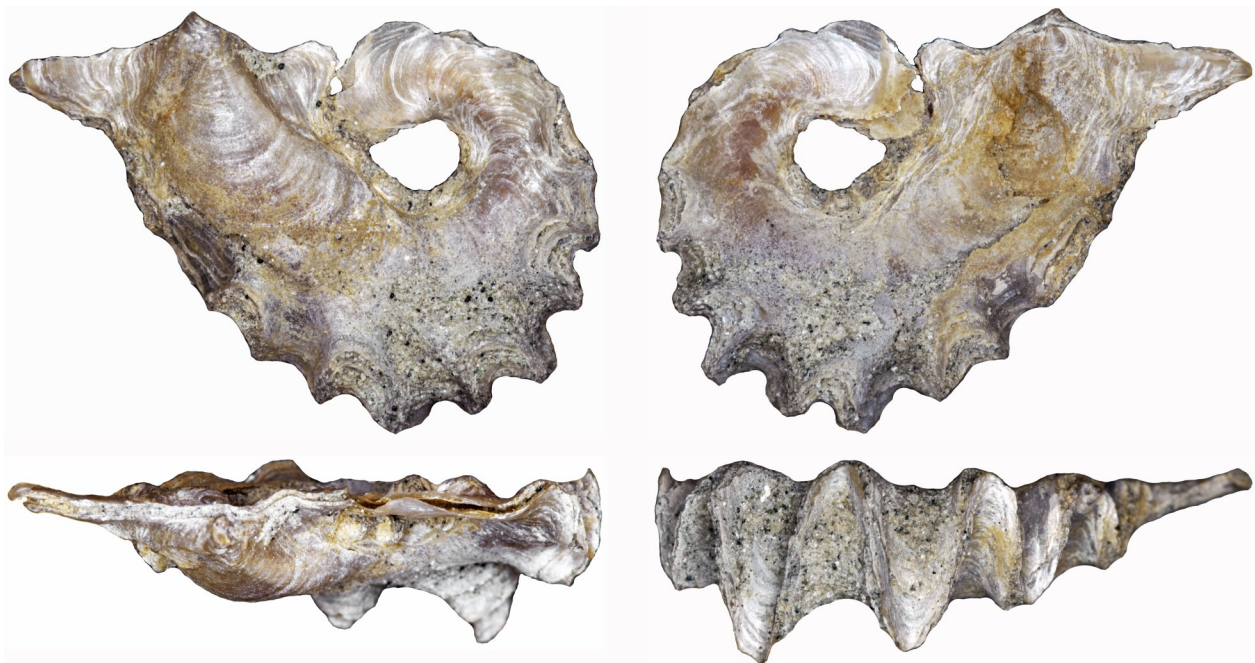
Agerostrea falcata (Morton, 1827), right valve, length 25.9 mm, height 16.1 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2617.



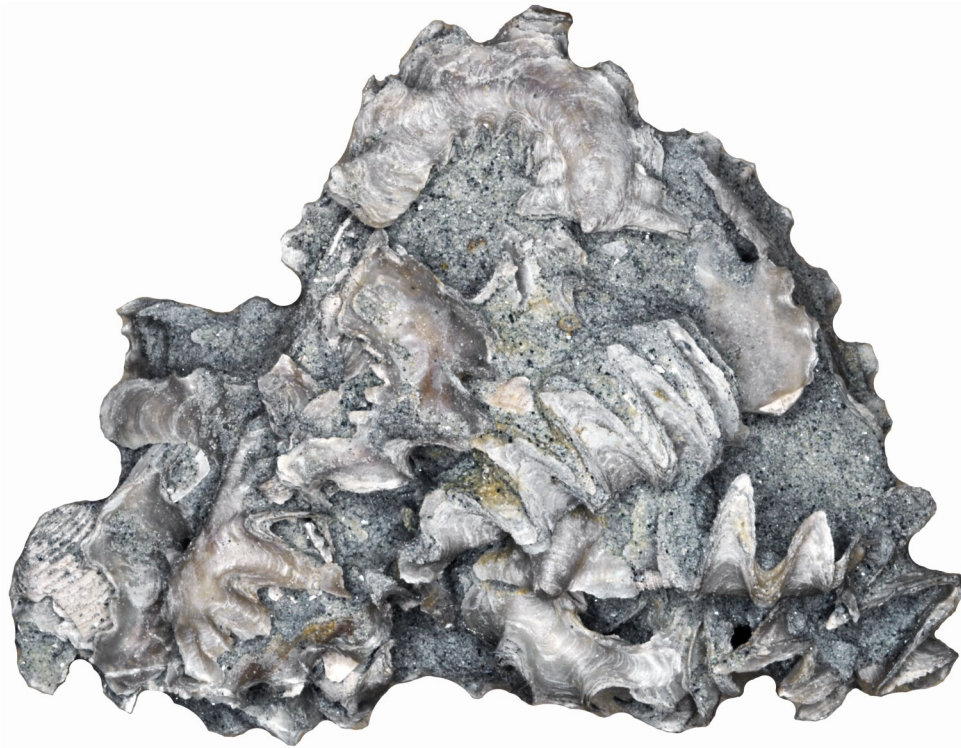
Agerostrea falcata (Morton, 1827), left valve, length 25.1 mm, height 20.1 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2618.



Agerostrea falcata (Morton, 1827), both valves, length 28.7 mm, height 16.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2619.

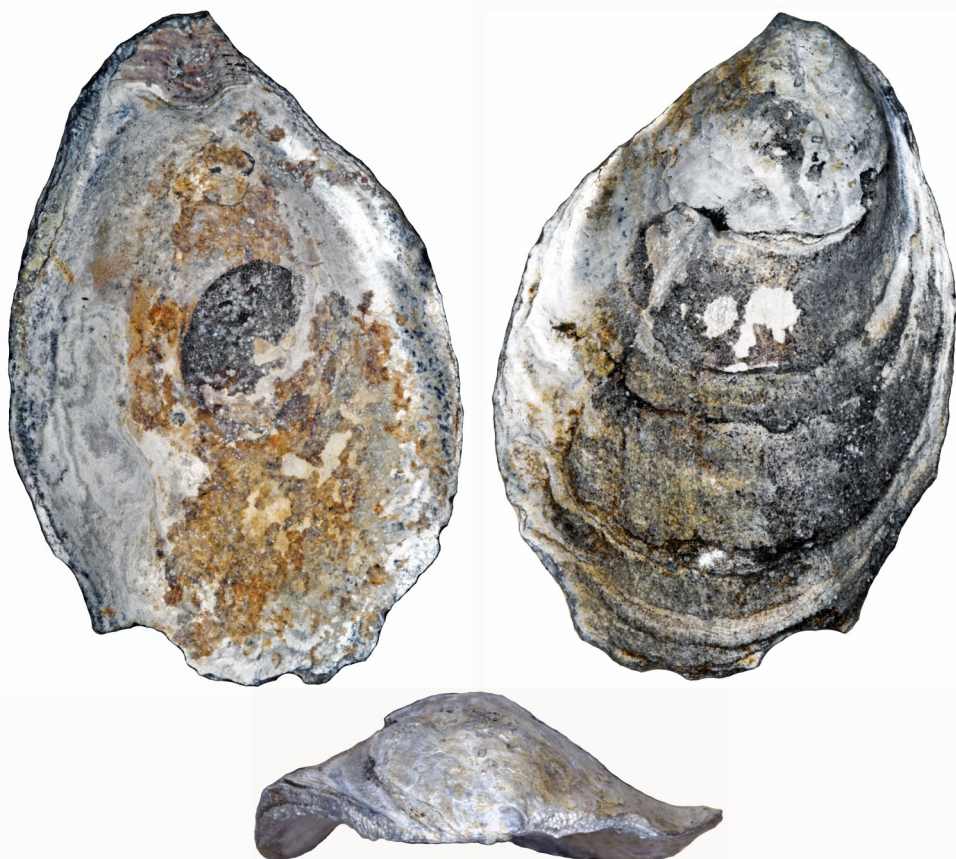


Agerostrea falcata (Morton, 1827), both valves, length 25.5 mm, height 18.8 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2620.



Concentration of *Agerostrea falcata* (Morton, 1827) from the Coffee Sand at MGS locality 129, length of block 74.5 mm. MGS figured specimen 2621.

Class Bivalvia, Subclass Pteriomorpha, Order Ostreida, Superfamily Ostreoidea, Family Ostreidae, Genus *Ostrea* B057-58.



Ostrea subspatulata Forbes, 1845, right valve, length 36.3, height 52.2, Coffee Sand, MGS locality 129. MGS figured specimen 2622.

Class Bivalvia, Subclass Pteriomorpha, Order Ostreida, Superfamily Ostreoidea, Family Ostreidae, Genus *Ambigostrea* B059.



Ambigostrea tecticosta (Gabb, 1860), right valve, length 18.0 mm, height 22.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2623.



Ambigostrea tecticosta (Gabb, 1860), left valve, length 22.0 mm, height 26.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2624.



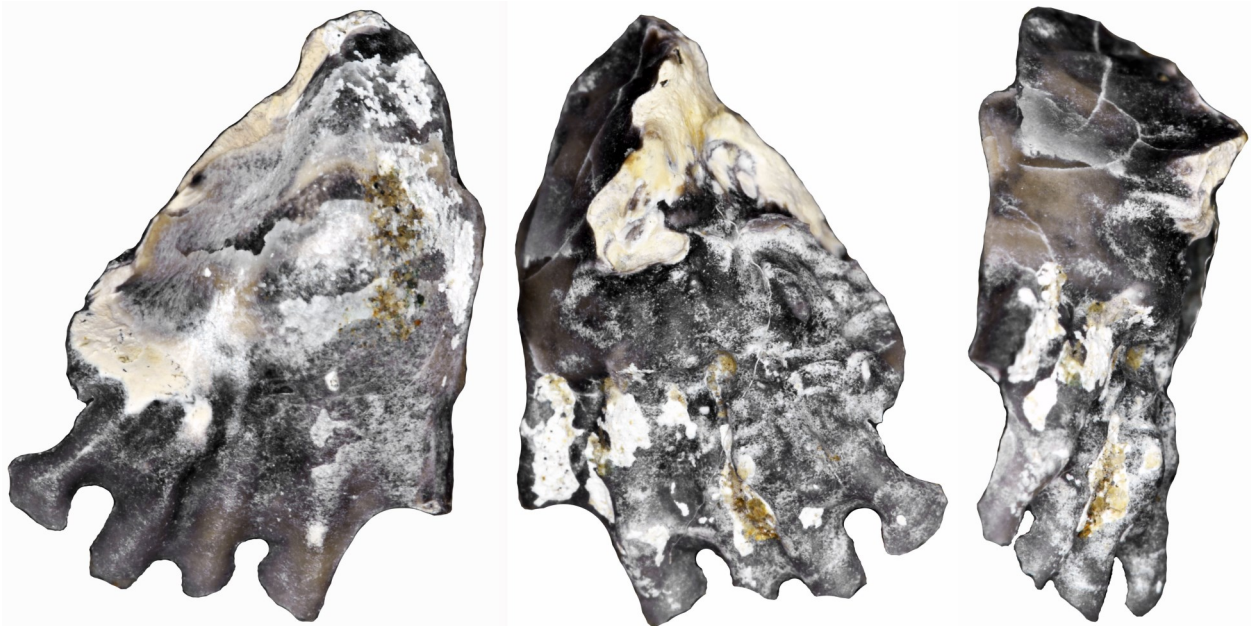
Ambigostrea tecticosta (Gabb, 1860), right valve, length 18.2 mm, height 23.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2625.



Ambigostrea tecticosta (Gabb, 1860), right valve, length 12.2 mm, height 15.3 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2626.

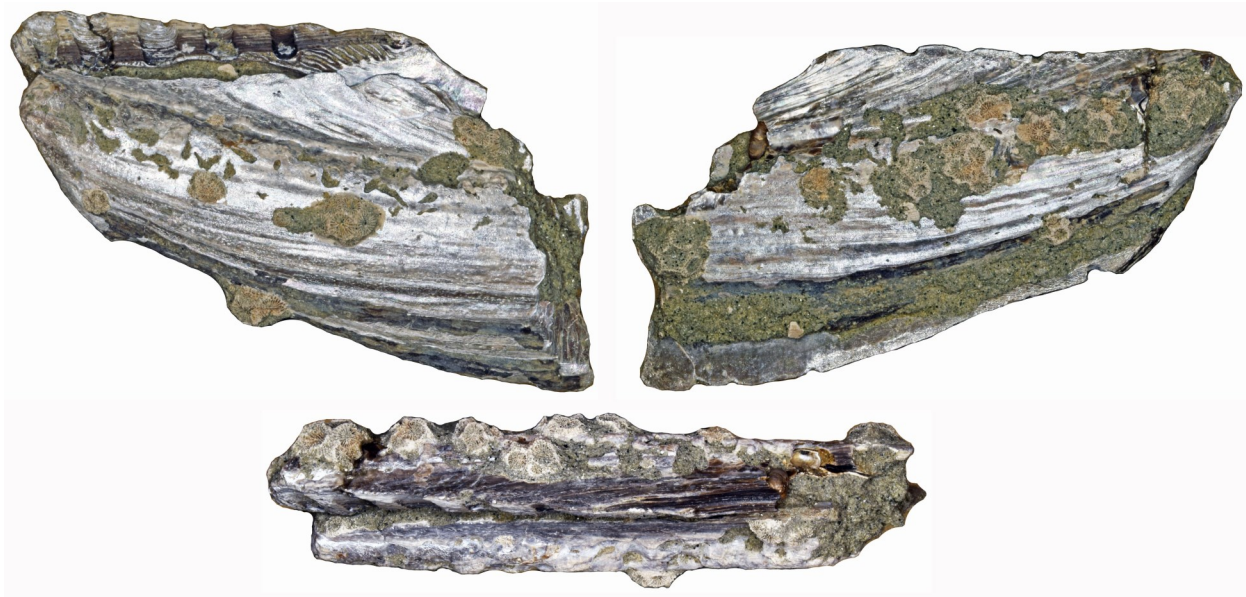


Ambigostrea tecticosta (Gabb, 1860), juvenile right valve, length 6.7 mm, incomplete height 15.3 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2627.

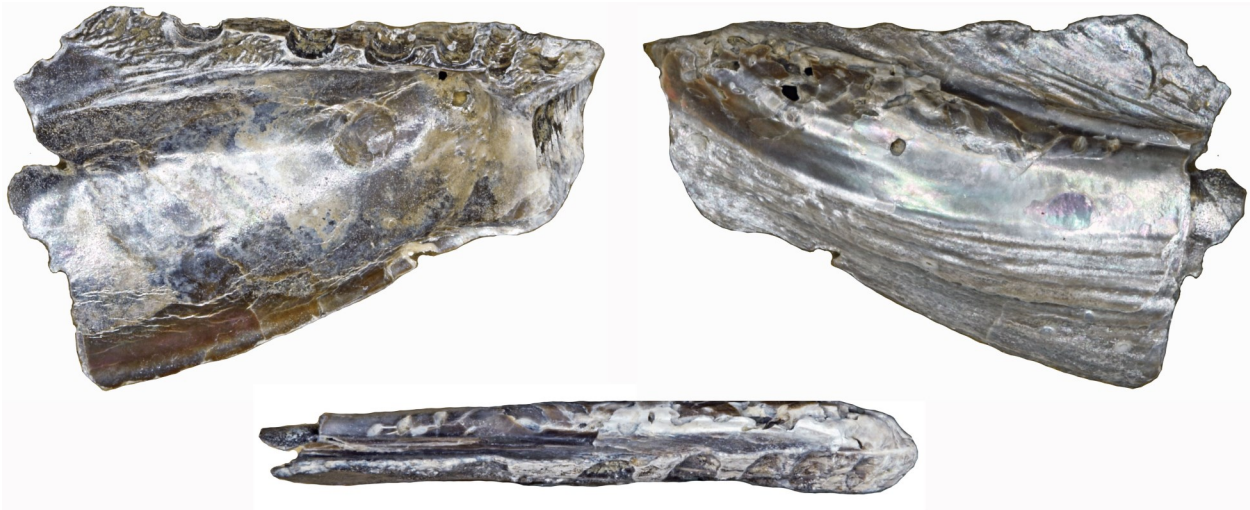


Ambigostrea tecticosta (Gabb, 1860), juvenile left valve, length 8.5 mm, height 12.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2628.

Class Bivalvia, Subclass Pteriomorpha, Order Ostreida, Superfamily Pterioidea, Family Bakevellidae, Genus *Gervilliopsis* B060.



Gervilliopsis ensiformis (Conrad, 1858), both valves, coral encrusted anterior end, incomplete length 71.4 mm, height 45.5, Coffee Sand, MGS locality 129. MGS figured specimen 2629.



Gervilliopsis ensiformis (Conrad, 1858), anterior end of partial left valve, length 40.0 mm, height 25.0, Coffee Sand, MGS locality 129. MGS figured specimen 2630.



Gervilliopsis ensiformis (Conrad, 1858), both valves, incomplete length 80.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2631.



Gervilliopsis ensiformis (Conrad, 1858), partial left valve, length 85.4 mm, height 45.0, Coffee Sand, MGS locality 129. MGS figured specimen 2632.



Gervilliopsis ensiformis (Conrad, 1858), anterior end of partial right valve of specimen with both valves, length 40.0 mm, height 25.0, Coffee Sand, MGS locality 129. MGS figured specimen 2633a.



Gervilliopsis ensiformis (Conrad, 1858), anterior end of partial left valve of specimen with both valves, length 40.0 mm, height 25.0, Coffee Sand, MGS locality 129. MGS figured specimen 2633b.



Gervilliopsis ensiformis (Conrad, 1858), left valve, length 122.0 mm, height 34.0, Owl Creek Formation, MGS locality 126a. MGS figured specimen 2634.



Gervilliopsis ensiformis (Conrad, 1858), right valve, incomplete length 94.5 mm, height 32.9, Owl Creek Formation, MGS locality 126a. MGS figured specimen 2635.

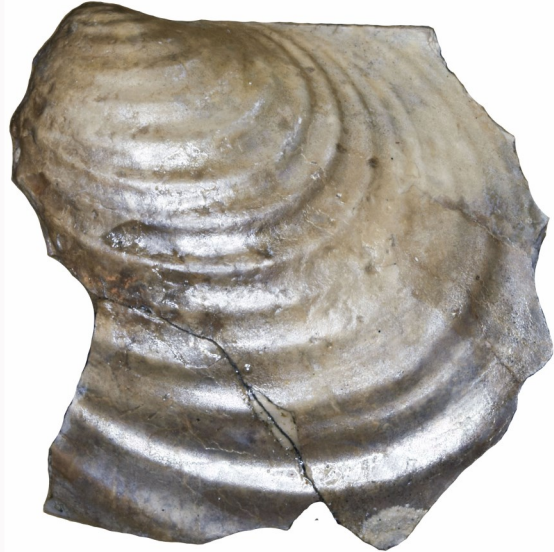
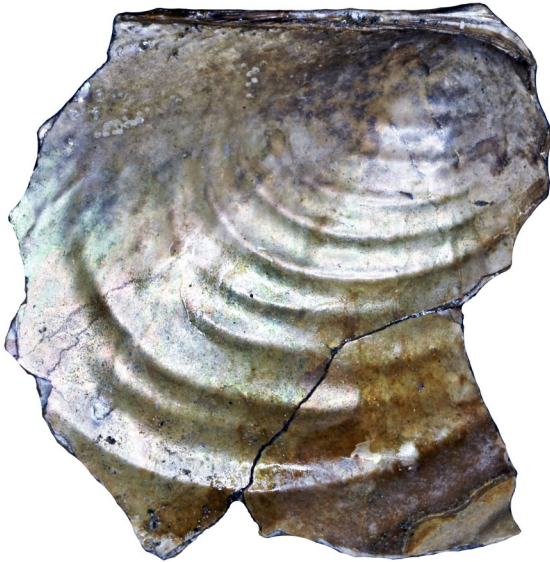
Class Bivalvia, Subclass Pteriomorpha, Order Ostreida, Superfamily Pterioidea, Family Inoceramidae, Genus *Inoceramus* B061-62.



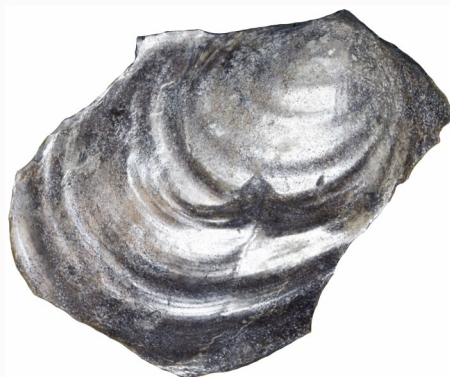
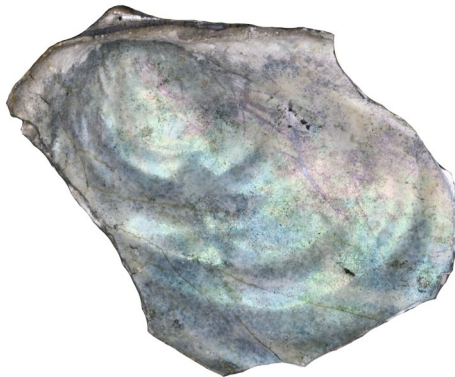
Inoceramus sagensis Owen, 1852, incomplete right valve, length 61.6, height 45.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2636.



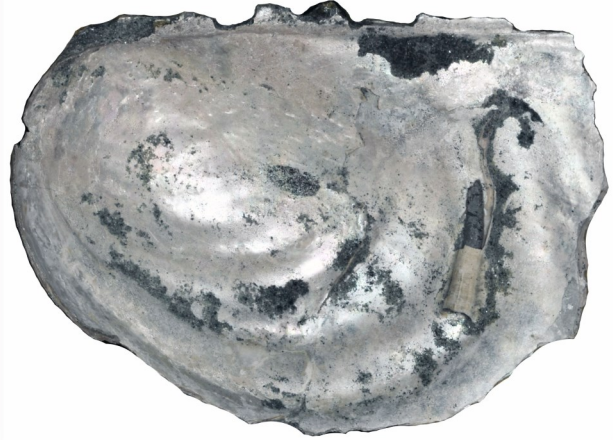
Inoceramus sagensis Owen, 1852, incomplete right valve, length 63.0 mm, height 47.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2637.



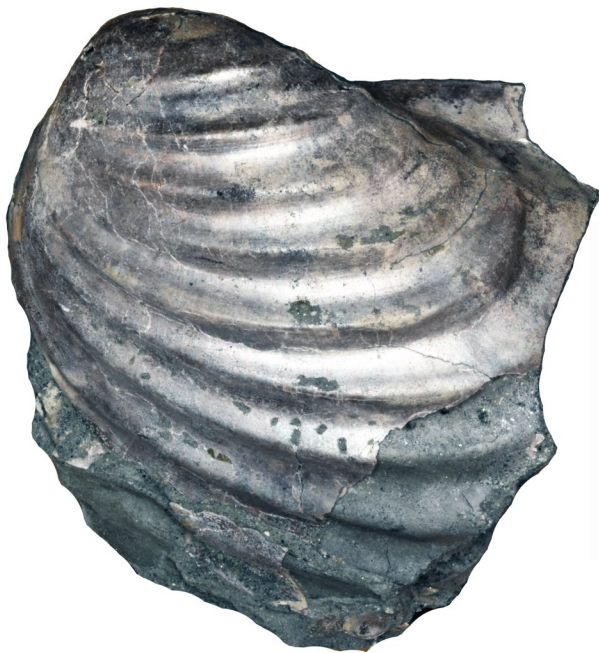
Inoceramus sagensis Owen, 1852, incomplete left valve, length 43.0 mm, height 43,0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2638.



Inoceramus sp., incomplete right valve, length 37.0 mm, height 30,0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2639.



Inoceramus sp., incomplete right valve, length 66.0 mm, height 46.5 mm, Coffee Sand, MGS locality 128. MGS figured specimen 2640.



Inoceramus sp., incomplete right valve, length 62.4 mm, height 67.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2641.

Class Bivalvia, Subclass Pteriomorpha, Order Ostreida, Superfamily Pterioidea, Family Bakevellidae, Genus *Pseudoptera* B063



Pseudoptera securiformis Stephenson, 1956, incomplete left valve, length 72.0, height 45.0. Coffee Sand, MGS locality 128. MGS figured specimen 2642.



Pseudoptera securiformis Stephenson, 1956, incomplete left valve, length 51.0 mm, height 41.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2643.



Pseudoptera securiformis Stephenson, 1956, incomplete left valve, length 39.6 mm, height 35.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2644.

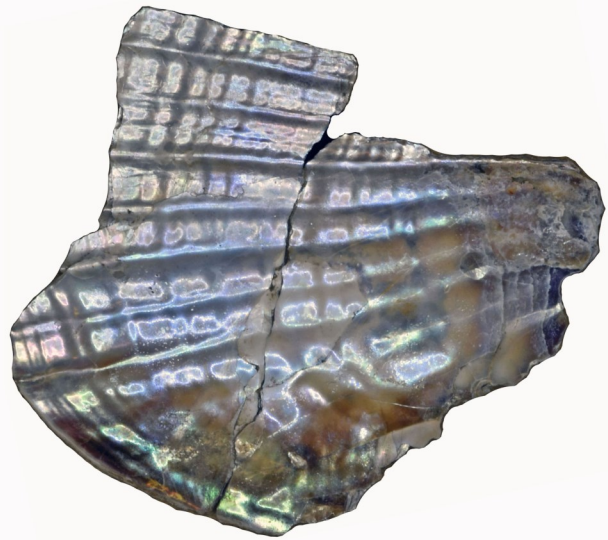
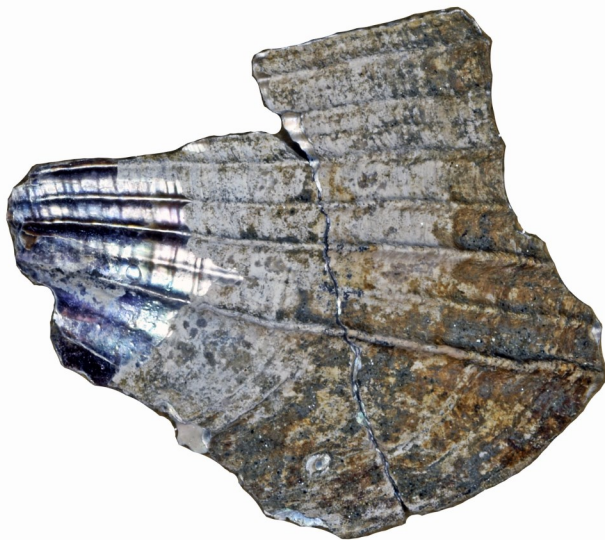


Pseudoptera securiformis Stephenson, 1956, incomplete right valve, length 19.0 mm, height 12.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2645.

Class Bivalvia, Subclass Pteriomorpha, Order Ostreida, Superfamily Pinnoidea, Family Pinnidae, Genus *Pinna* B064



Pinna sp., partial left valve, length 140 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2646.

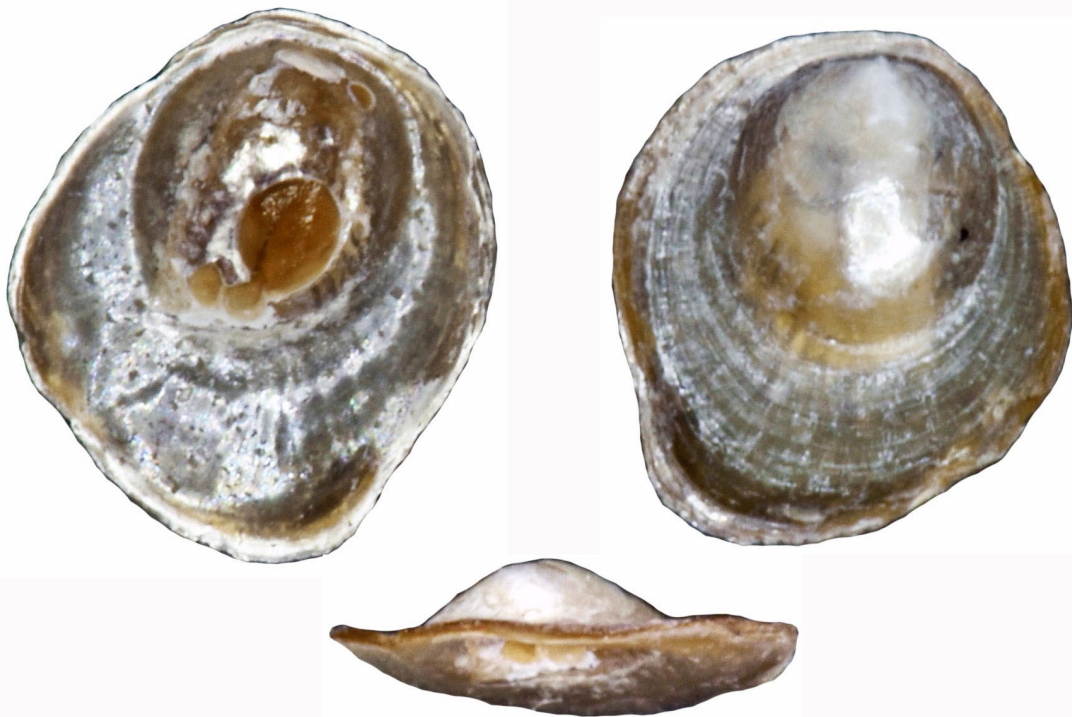


Pinna sp., posterior fragment of left valve, length 50.0 mm, height 45.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2647.

Class Bivalvia, Subclass Pteriomorpha, Order Ostreida, Superfamily Anomioidea, Family Anomiidae, Genus *Anomia* B065-66.



Anomia argentaria Morton, 1833, left valve, length 5.0 mm, height 4.3 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2648.



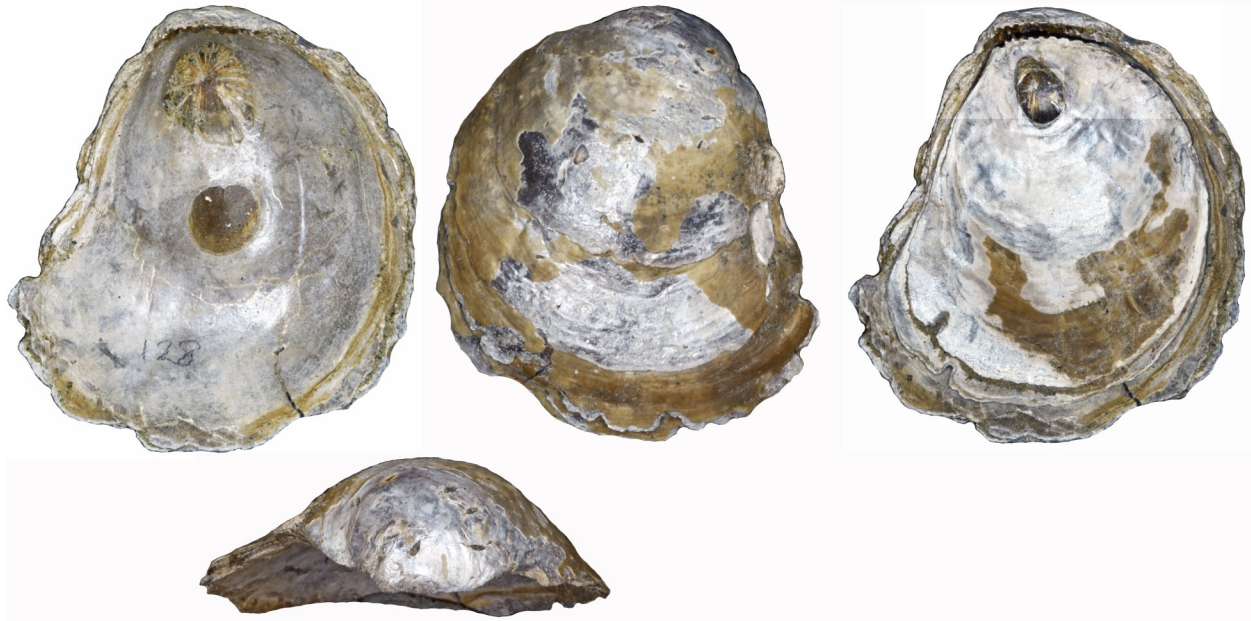
Anomia argentaria Morton, 1833, juvenile, left valve, length 4.5 mm, height 5.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2649.



Anomia argentaria Morton, 1833, right valve of complete specimen, length 32.6 mm, height 30.0 mm, Coffee Sand, MGS locality 129, upper clay bed. MGS figured specimen 2650a.



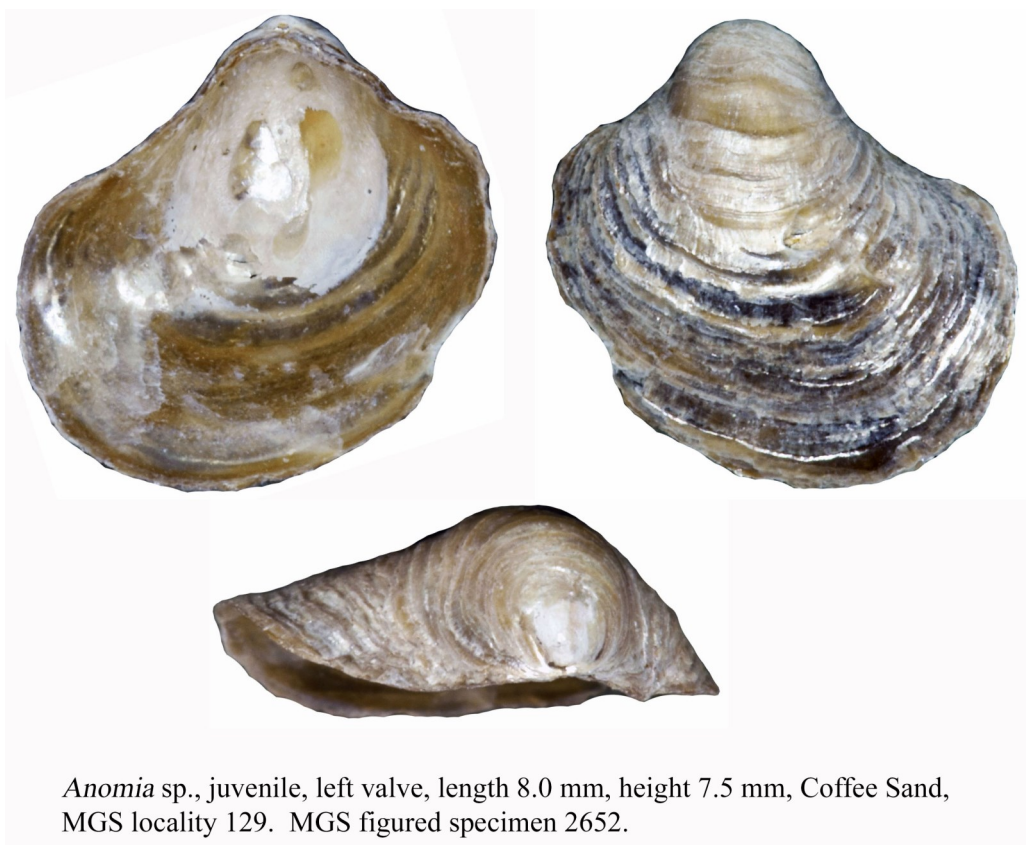
Anomia argentaria Morton, 1833, left valve of complete specimen, length 39.5 mm, height 34.8 mm, Coffee Sand, MGS locality 129, upper clay bed. MGS figured specimen 2650b.



Anomia argentaria Morton, 1833, left valve of complete specimen, length 30.5 mm, height 33.7 mm, Coffee Sand, MGS locality 128. MGS figured specimen 2651a.



Anomia argentaria Morton, 1833, right valve of complete specimen, length 24.2 mm, height 29.0 mm, Coffee Sand, MGS locality 128. MGS figured specimen 2651b.



Class Bivalvia, Subclass Pteriomorpha, Order Ostreida, Superfamily Anomioidea, Family Anomiidae, Genus *Pododesmus* B067.





Pododesmus scabra (Morton, 1834), left valve of complete specimen, length 32.4 mm, height 32.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2654.

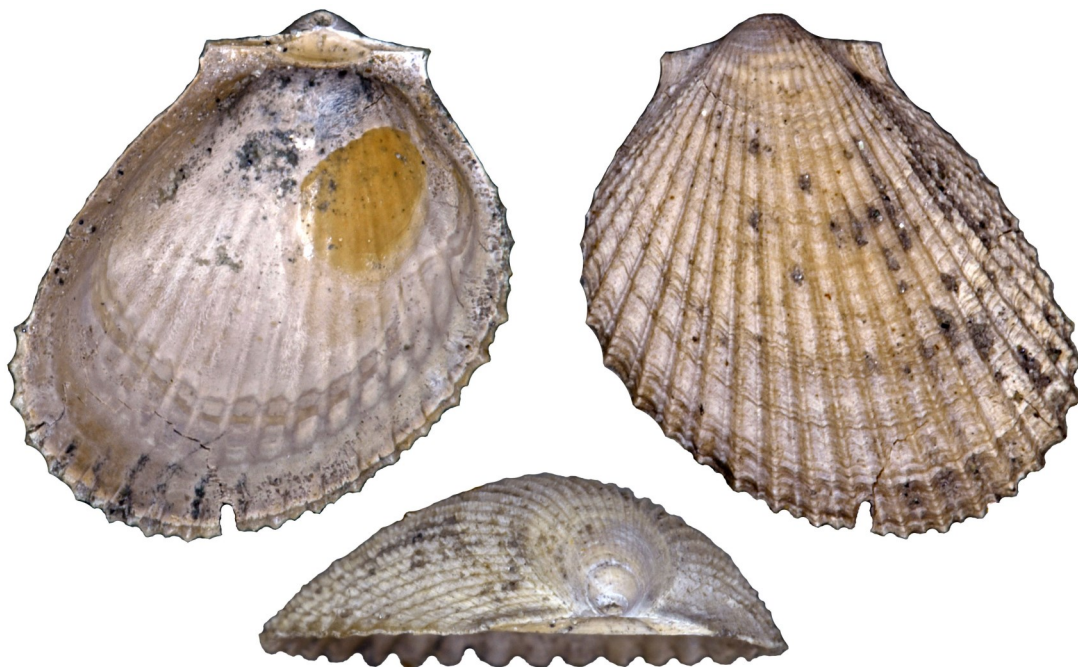


Pododesmus scabra (Morton, 1834), left valve of complete specimen, length 35.5 mm, height 29.3 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2655.



Pododesmus scabra (Morton, 1834), left valve of complete specimen, length 34.5 mm, height 32.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2656.

Class Bivalvia, Subclass Pteriomorpha, Order Limida, Superfamily Limoidea, Family Limidae, Genus *Lima* B068.



Lima (Pseudolimea) reticulata Lyell and Forbes, 1845, left valve, length 11.0 mm, height 12.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2657.



Lima (Pseudolimea) reticulata Lyell and Forbes, 1845, left valve, length 12.5 mm, height 13.8 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2658.



Lima (Pseudolimea) reticulata Lyell and Forbes, 1845, right valve, length 12.1 mm, height 13.1 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2659.



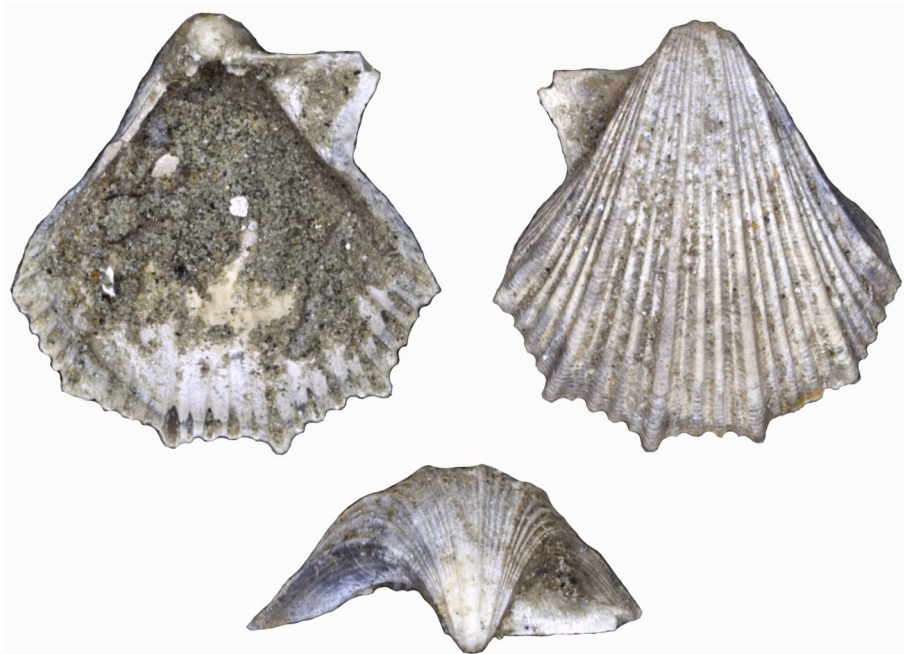
Lima (Pseudolimea) reticulata Lyell and Forbes, 1845, left valve, length 19.9 mm, height 20.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2660.

Class Bivalvia, Subclass Pteriomorpha, Order Mytilida, Superfamily Mytiloidea, Family Mytilidae, Subfamily Lithophaginae, Genus *Lithophaga* B069.

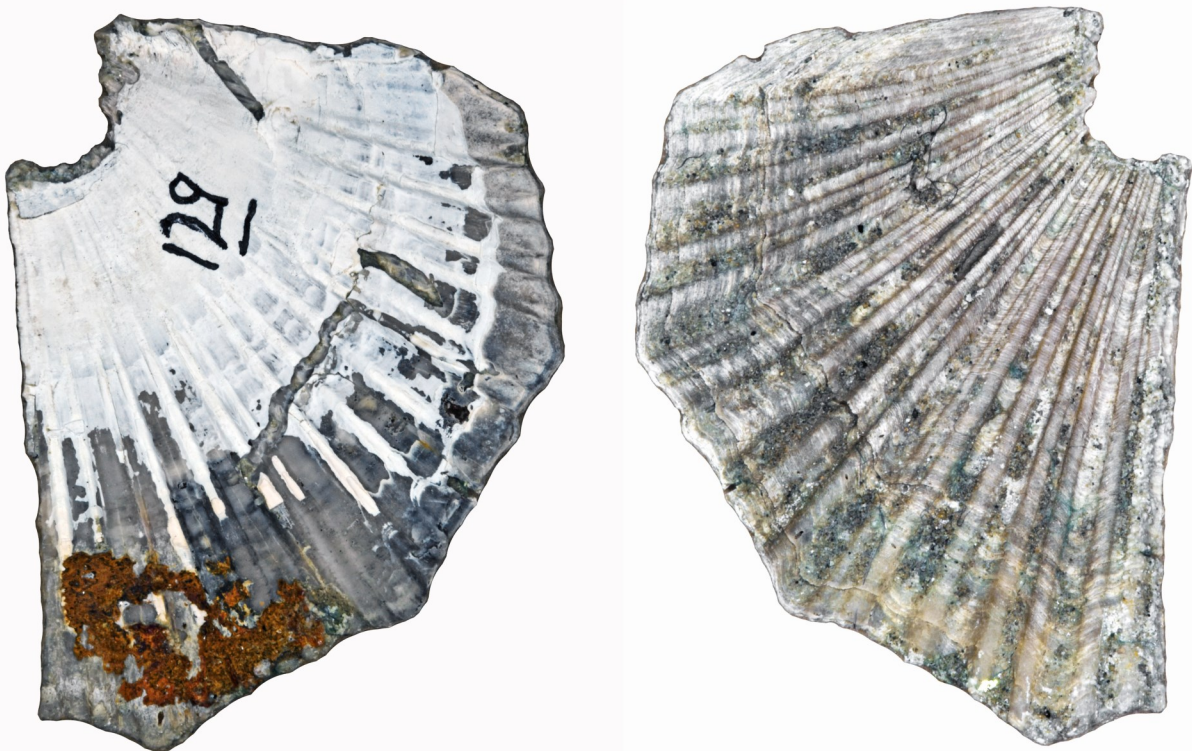


Lithophaga carolinensis (Conrad, 1875), both valves in boring in hinge line of *Gervilliopsis ensiformis* (MGS figured specimen 2629), showing the left valve, length 5.0 mm, height 3.0 mm, interior of right valve of another specimen in boring above. MGS figured specimens 2661 and 2662, respectively. Sand-filled *Lithophaga* borings at left.

Class Bivalvia, Subclass Pteriomorpha, Order Pectinida, Superfamily Pectinoidea, Family Neitheidae, Genus *Neitheia* B070.



Neitheia quinquecostata Sowerby, 1814, left valve, length 15.5 mm, height 16.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2663.

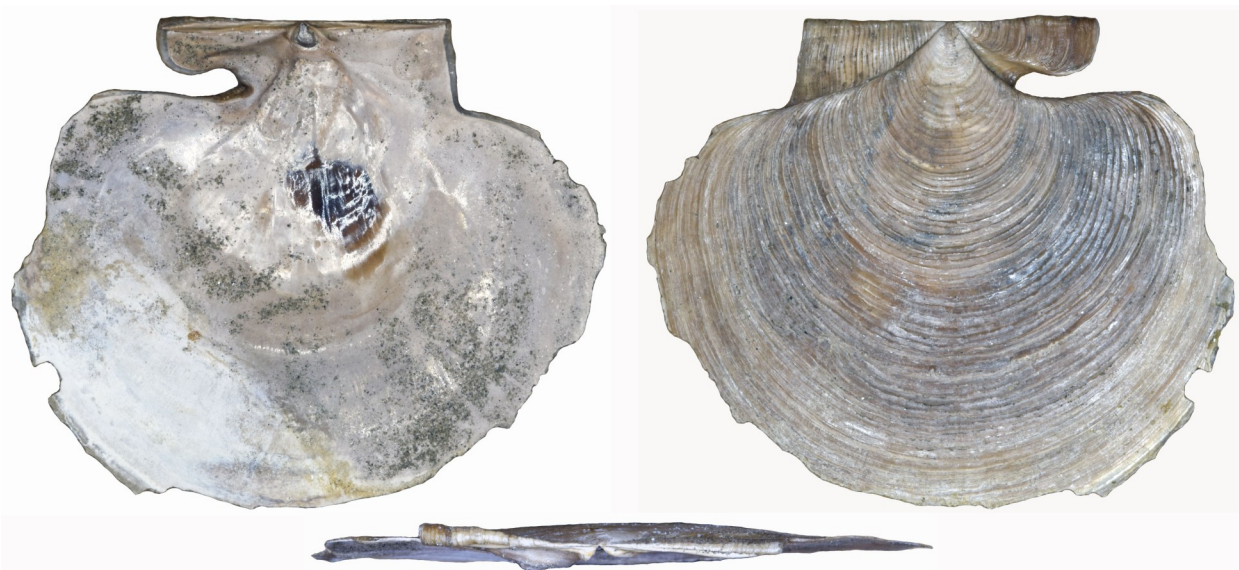


Neitheia quinquecostata Sowerby, 1814, right valve fragment, length 27.4 mm, height 37.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2664.

Class Bivalvia, Subclass Pteriomorpha, Order Pectinida, Superfamily Pectinoidea, Family Pectinidae, Genus *Pecten* B071.



Pecten burlingtonensis Gabb, 1860, right valve, length 55.5 mm, height 53.5.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2665.



Pecten burlingtonensis Gabb, 1860, right valve, length 63.5 mm, height 53.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2666.



Pecten burlingtonensis Gabb, 1860, left valve, length 35.3 mm, height 39.0 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2667.



Pecten burlingtonensis Gabb, 1860, left valve, length 32.0 mm, height 33.2 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2668.



Pecten burlingtonensis Gabb, 1860, both valves showing right valve and right on left valve, length 32.0 mm, height 31.6 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2669.



Pecten burlingtonensis Gabb, 1860, both valves showing left valve and left valve on right valve, length 32.3 mm, height 31.4 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2670.



Pecten burlingtonensis Gabb, 1860, both valves showing left valve and left valve on right valve, length 34.8 mm, height 34.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2671.

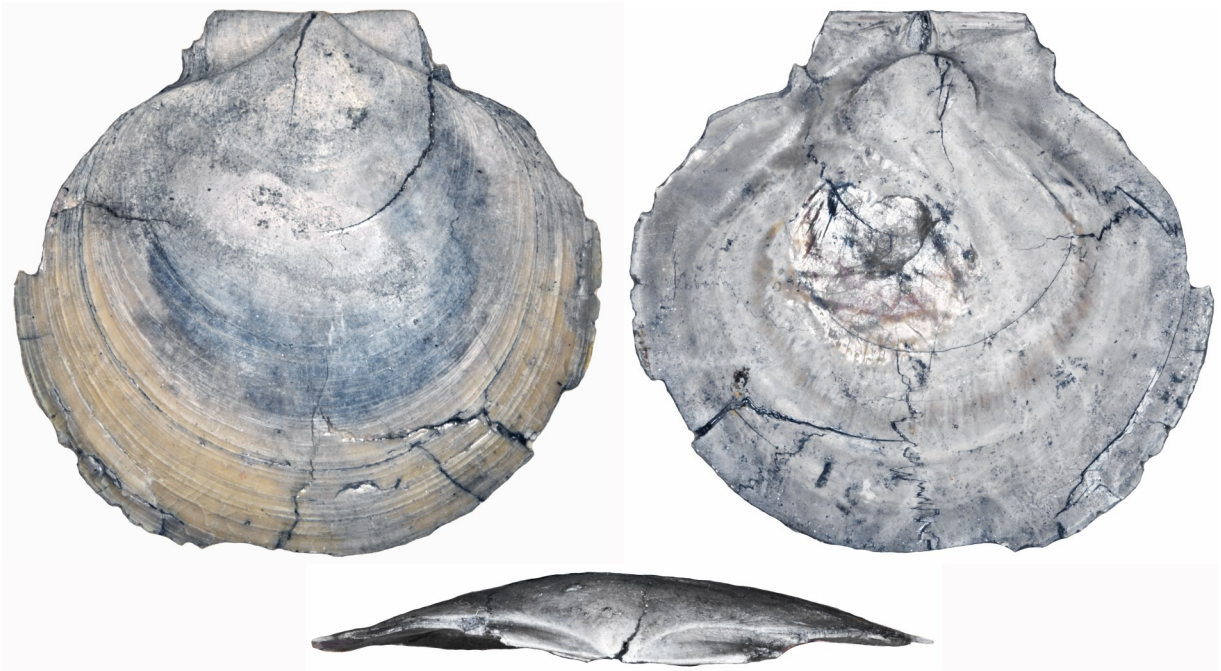


Pecten burlingtonensis Gabb, 1860, juvenile, right valve, length 6.0 mm, height 6.7 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2672.



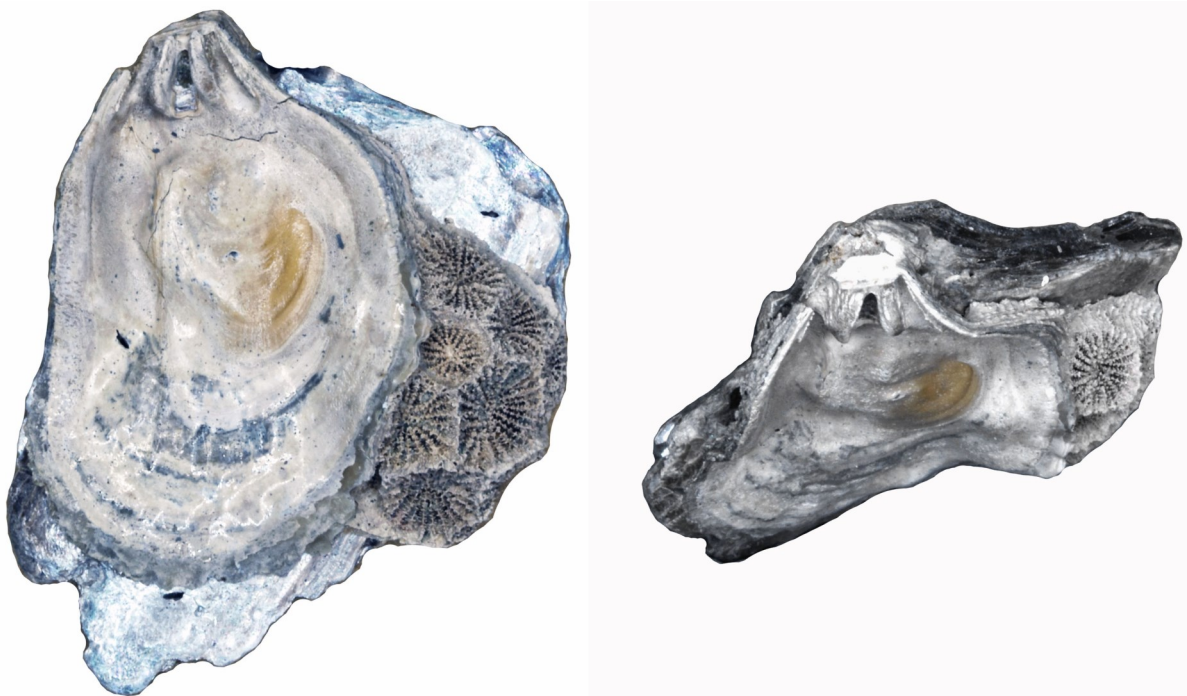
Pecten burlingtonensis Gabb, 1860, juvenile, left valve, length 5.0 mm, height 5.5 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2673.

Class Bivalvia, Subclass Pteriomorpha, Order Pectinida, Superfamily Pectinoidea, Family Pectinidae, Genus *Amusium* B072.



Amusium sp., left valve, length 74.6 mm, height 69.8 mm, Coffee Sand, MGS locality 129. MGS figured specimen 2674.

Class Bivalvia, Subclass Pteriomorpha, Order Pectinida, Superfamily Plicatuloidea, Family Plicatulidae, Genus *Plicatula* B073.



Plicatula sp., right valve attached with corals to a *Gervilliopsis* shell fragment, length 15.5 mm, height 21.5 mm, MGS locality 129. MGS specimen 2675.

Class Bivalvia, Subclass Pteriomorpha, Indeterminate species, possible oyster larvae at top.

